

MANUFACTURERS' RECORD

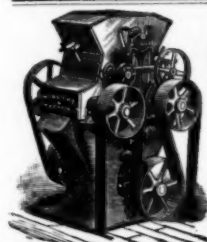
A Weekly Southern Industrial and Hardware Newspaper.

VOL. 9. No. 8.
WEEKLY.

BALTIMORE, APRIL 3, 1886.

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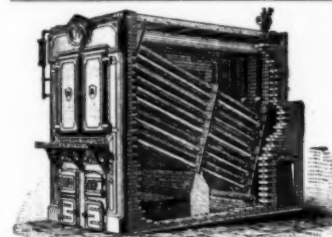
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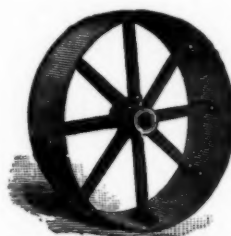
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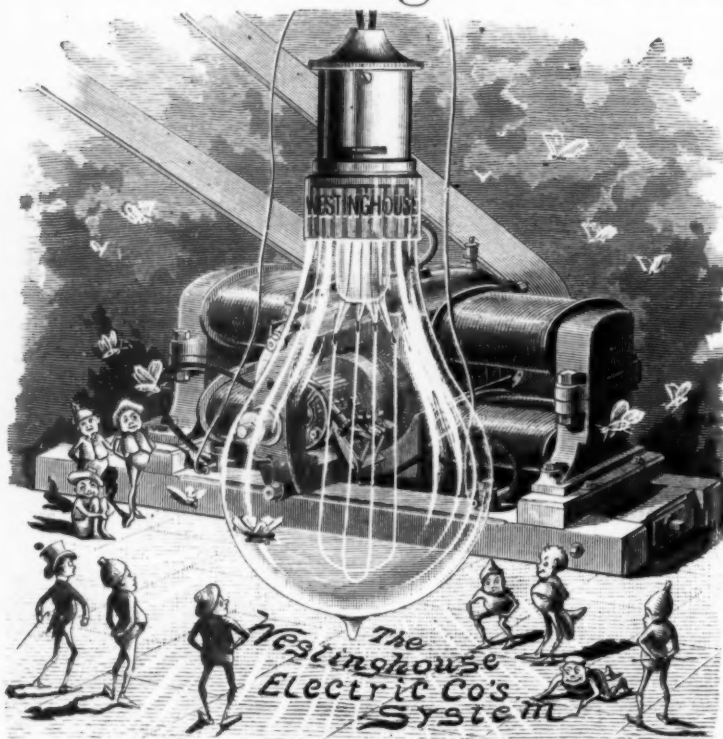
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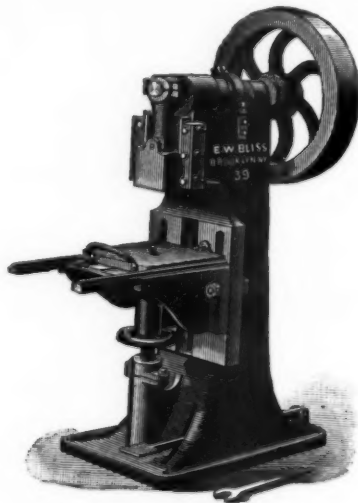
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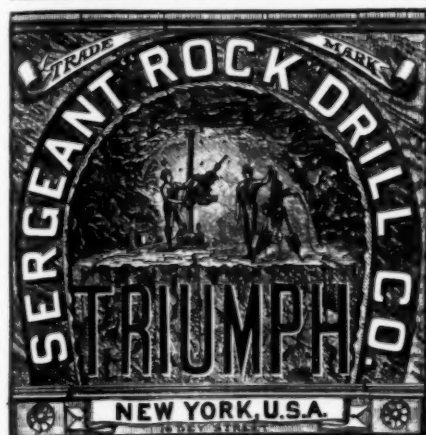
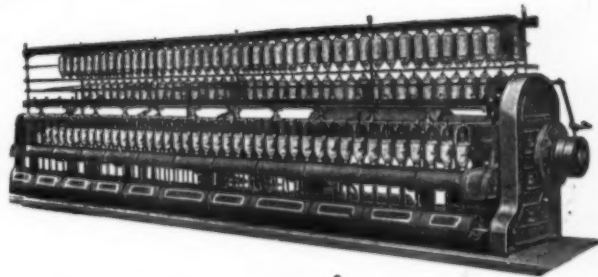
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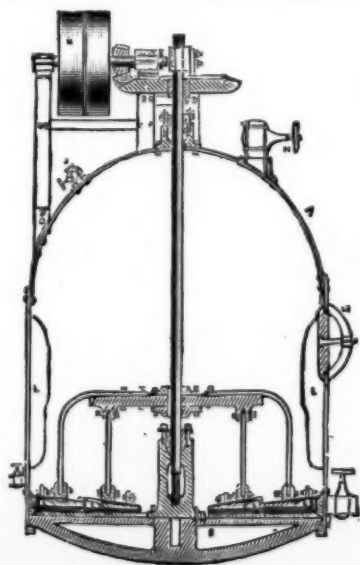
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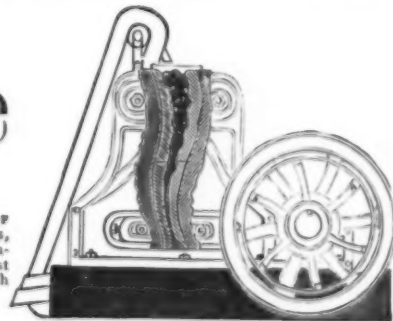
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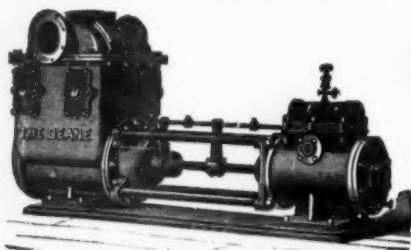
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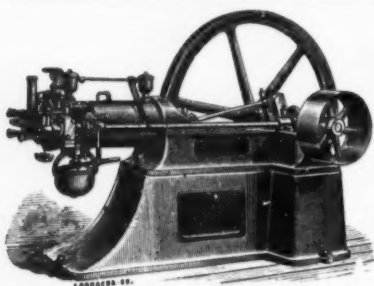
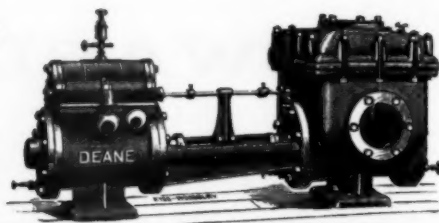
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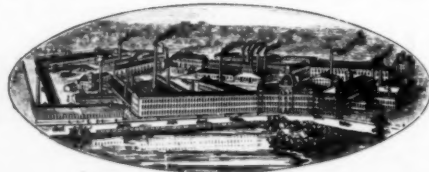
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Extra for outside pages and opposite first page of
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BALTIMORE, APRIL 3, 1886.

The Effect on English Industries of the Tariff in the United States.

One by one the old stand-by arguments of the free traders are shown to be without foundation. One of their pet doctrines for many years was that free trade gave greater prosperity to the manufacturing interests of Great Britain than protection did to those of America. Since this has been so thoroughly disproved by the several industrial depressions of late years in that country, this argument has been retired from active service. Another favorite doctrine has been that in maintaining a protective tariff in this country we were really doing the manufacturers of England a great service by enabling them to control the world's markets, which the free traders claim they could do, so long as American manufacturers did not compete with them, and this, they said, could not be done while our protective tariff existed. They have said that, while our tariff operated against Great Britain's manufacturers shipping to this country, this loss was more than counter-balanced by keeping our manufacturers out of competition with them in foreign markets. This argument must now be laid aside. Great Britain is not longing for high protection in this country, as has so often been stated. The report of the Royal Commission, appointed to enquire into the business depression throughout Great Britain, contains some very strong statements about the damage to the trade of that country by high tariffs in other countries. Some of

the answers sent by the Chambers of Commerce were as follows:

Aberdeen—"Depression largely due to high foreign tariffs."

Barnsley—"Foreign tariffs at the bottom of all our troubles."

Batley—"Affected very injuriously and very considerably by foreign tariffs."

Belfast—"Foreign competition and foreign tariffs."

Birmingham—"Foreign competition in neutral markets. Foreign import duties on home manufactured goods exported abroad."

Bisstell (near Leeds)—"Increased hostile tariffs on our manufactured goods exported, and the competition of foreign manufacturers in our home markets."

Cardiff—"Foreign tariffs have materially affected our iron and steel trades."

Clockheaton—"Foreign tariffs are decidedly injurious to the trade of this district."

Dewsbury—"Foreign tariffs have greatly injured our trade."

Dublin—"The depression of trade is, to a great extent, caused by the levying of high duties on goods exported from the United Kingdom."

Dudley—"Trade is greatly restricted and returns diminished by adverse foreign tariffs."

Dundee—"The imposition of very high tariffs on goods of British origin by the countries on the Continent of Europe; also, the duties imposed upon these goods in the United States."

Halifax—"Trade seriously affected by foreign tariffs."

Hartlepool—"Foreign tariffs and countries have undoubtedly injured our trade in certain branches."

Hockmondwike—"Foreign tariffs have undoubtedly injuriously affected the trade of this district."

Huddersfield—"The protective tariffs of other countries, and even of our own colonies, have much to do with the present depression. Their effect is most seriously felt on low goods."

Leeds—"Foreign tariffs have seriously injured the traders of this district."

Leith—"The present depression arises from over-production, foreign competition and the system of foreign tariffs and bounties."

Liverpool—"If hostile tariffs were ameliorated, and more especially foreign bounties abolished, the increase in our industry would be great."

Manchester—"Foreign tariffs are the bane of our existence."

Morley—"Protective and hostile tariffs of other countries, and especially our own colonies, have much to do with the present depression."

Newark-on-Trent—"Foreign tariffs, to a great extent, especially in cases where they have been recently increased and bounties given."

North Shields and Tynemouth—"Foreign tariffs and competition are both felt oppressive."

North Staffordshire—"Foreign tariffs to a serious extent."

Ossett—"The trade of our town and country generally would be greatly improved if the foreign tariffs were removed, or a corresponding duty imposed upon such manufactured goods as are imported from any foreign country."

Salt Chamber of Commerce—"Prohibition duties in foreign countries, competition on the part of foreign countries, salt being imported into England and our colonies."

Southampton—"Foreign duties."

South of Scotland Chamber of Commerce—"Foreign tariffs affect our trade prejudicially."

Sunderland—"Foreign tariffs affect glass and bottle trade adversely."

Wakefield—"Increasing foreign competition."

Wolverhampton—"Foreign competition one of the main causes of the altered condition of trade."

Worcester—"Gloves and porcelain are directly affected by foreign competition and tariffs."

A Big Scheme.

In a late issue we stated that it was reported that Mr. H. F. de Bardeleben, of Birmingham, had organized a company to build two furnaces and a steel plant at Jonesboro, 13 miles from Birmingham. The plans for this new enterprise have been made on a very extensive scale, and if carried out will result in developing another great industrial center in the South. Mr. de Bardeleben states that the company will have a capital of \$3,000,000, and that they are going to build up a city that will contain 8 furnaces within two years. Two railroads are to be built to this town. In an interview with a Birmingham Age reporter, Mr. de Bardeleben said:

"No stockholder will be allowed to come in who can't make smoke. It will take \$100,000 to come in, and the man who can make most smoke can have the most stock. In less than twenty-five years the two cities (Birmingham and Jonesboro) will meet half way, and Birmingham will have a population of 200,000. The story of the place is not yet told. It is only a village. I have bought in the past two weeks \$125,000 in real estate, centrally located, that I paid high prices for. That property is not for sale in Birmingham. I am going North and place it on the market. We will organize Monday afternoon, and I will visit New York, to place some Birmingham property on the market, and will then go through to Pittsburg, to order material for two furnace plants, and make arrangements for the steel plant we propose establishing at Jonesboro."

With what astonishing rapidity the South is developing these gigantic enterprises that we are reporting week after week very clearly show. It is not alone American capitalists, but moneyed men from Europe that are investing so liberally in the South. Moreover it is not simply in the establishments of big enterprises requiring immense capital that progress is seen; in the smaller and more widely diversified industries, which are essential to the permanent industrial growth and prosperity of the South, there is also great activity. Almost every line of manufacturing is represented in the new enterprises that are being organized. As month after month passes the industrial—and hence naturally the general business—outlook of the South becomes more promising.

THE first chain factory in the South is about to be established in Birmingham, Ala.—American Engineer.

That is a mistake. This factory has been in operation for several months, and is crowded with orders. It is only for a very short time when it can be said that any new enterprise "is about to be established in Birmingham." If the Birmingham people begin to talk seriously about starting a new factory, it is only a few days before the buildings are being erected. Birmingham is a good illustration of what the New South is doing. It is an example of the push and enterprise of that section.

WESTERN North Carolina and East Tennessee constitutes what may well be called the Switzerland of America. It has been called with propriety the "Slagland region." A railroad taps it, the Western North Carolina. The soil is rich, and produces large crops of all kinds of farm products. It is adopted to grazing also. The capabilities of the county are almost illimitable. A religious paper published in that vicinity, the Blue Ridge Baptist, brings us in meager outline a story in real life more wonderful than anything the imagination of Miss Murfree has portrayed, and especially interesting from the glimpse thus afforded of the true solvent for the Southern problem.

It is now only six months since a California capitalist, who had sought that region as a sanitarium, began the founding of a town in the midst of a tract of 80,000 acres of land which he bought, and upon which homes are procurable without capital. Not that he professes to give away the land, like the United States Government, to actual settlers, but that he proposes to sell it on long time to actual settlers upon certain conditions. The survey is being made on the Piedmontese plan of observing natural boundaries and conforming to the convenience of cultivation. In two month's time not less than 25,000 acres were sold, and a prosperous manufacturing town is now furnishing employment to thousands of workmen. After being so long hemmed in by mountains, the region has burst the cerements of a living death and is developing with a rapidity more than magical. It only needed the enterprise of one man to inaugurate an era of development and set in motion a train of events big with the promise of revolution to all that region.—Chicago Inter-Ocean.

Of the resources and attractions of Western North Carolina the Inter-Ocean can hardly say too much. It is certainly a magnificent country, magnificent in scenery, in climate and resources. But we think it is a good deal overdrawn to say that a new town has lately been founded there giving employment to thousands of hands. Dr. Clark Whittier did purchase about 75,000 acres of land which he is offering to sell on long time, but it is hardly probably that 25,000 acres have been sold in two months. Moreover, the "prosperous manufacturing town furnishing employment to thousands of workmen" is a thing of the future. As yet the town of Whittier is too small to be called a manufacturing center.

WE know of no journal that has done more for the development of the South than the **BALTIMORE MANUFACTURERS' RECORD**. They are in direct communication with all parts of the South, their correspondents are reliable and enterprising, and as an advertising medium this paper is not to be excelled. The publishers are energetic and thorough going business men, and held on and worked up where most men would have become discouraged. And the result is a prosperous journal that continues to grow as it deserves to do. It is devoted to the South and her interests, and we should rally to them.—Atlanta Capitol.

MANAGERS of mills, factories, furnaces, mines, etc., and parties starting manufacturing enterprises, and needing machinery or supplies of any kind, will find it profitable to consult the advertising columns of the **MANUFACTURERS' RECORD**. Its pages contain names of the best houses in the country among manufacturers of and dealers in machinery and mill supplies.

Our Birmingham Letter.

Rapid Advances in Real Estate Values—Some Remarks on the Tariff, etc.

[Special correspondence MANUFACTURERS' RECORD.]

BIRMINGHAM, ALA., March 29, 1886.

The boom which has been hovering over Birmingham for some time has lit on us in good earnest and with every indication of a determination to stay. Real estate values had been advancing steadily from the 1st of January, and some farther improvement was looked for; but nobody appears to have had any idea that prices were likely to reach the point they have, for another year at least. But the consummation of Mr. de Bardeleben's deal with an English company, and the announcement that he and the corporation in question intended to build up a suburban manufacturing town, with 8 furnaces and a steel plant to begin with, at Jonesboro, acted as a strong stimulant to the market, and the situation was farther excited by heavy purchases by Eastern and Northern capitalists, and by the movements of the Georgia Central and Kansas City, Fort Scott & Gulf interests, both of which have made their arrangements to build to the town. All sorts of city property have advanced from 30 to 100 per cent. in two months, and more transactions have been made in that time than were noted for a whole year previously. To give some idea of the rapidity with which property has advanced in value: A lot 90x140 which Dr. Caldwell bought in 1876 for \$1,250, he sold in August, 1885, to Johnson & Boddie for \$10,000. In March, 1886, they sold 40x100 of the same lot for \$7,600, and the whole property is worth to-day at least \$30,000. In 1883 the Elyton Land Co. sold the corner of First avenue and 20th street, 100x182 feet, to Messrs. Moore, Moore & Handley for \$15,000. In 1884 they sold off 50x100 feet of this property for \$15,000, thereby clearing their purchase. The same 50 feet was sold for \$21,000 a little later. The remainder of the lot is saleable now, without improvements, at \$88,000. So it goes! One sees fortunes made almost daily.

Attention is not confined to city property. The excitement has affected outside matters as well. The probabilities of large industrial growth in the immediate future has created a heavy demand for iron property at higher prices than were ever before deemed possible. Of the two desirable properties in the market at the date of my last letter, one, that at Red Gap, was closed out at \$45 per acre, and the remaining one, only 160 acres, is held at considerably over \$100 per acre. Coal lands, which have been rather dull sale since the holidays, are also coming to the front, and several Eastern syndicates are looking around for choice selections. The railway land departments have the best and cheapest things in this line now on the tapis, as private owners able to hold are not offering to any extent. For two weeks without a break the situation has been firm and advancing, and there is every promise that certain developments important to Southern industry, which are likely to transpire this week, may give us another spurt.

There is absolutely nothing new in the direction of pig iron production. Prices remain as at last report; market steady. Orders are coming in freely as usual from the East for foundry and from the West for mill irons. All iron lines are active and without quotable change. In general business the situation is quite satisfactory. Merchants and shopkeepers all report good trade and are happy. The total amount of liabilities in connection with all the business failures in Birmingham for the year 1885 did not amount to \$30,000.

Appearances are that the Morris mine, which has enjoyed a good deal of a monopoly in the production of ores, is to have some pretty stiff competition before long. A new ore mine is being developed near Trussville, and property has been bought close to Birmingham which it is said is for account of an experienced New Jersey ore miner. The market for ore is constantly increasing. Probably Mr. Morris' output does not fall much short of 1,200 tons per day, about 400 of which goes to points between here and Chattanooga, including that place.

I observe that the Iron Age is somewhat exercised over the proposition to pool a lot of coal properties in this district, and seems unwilling to accept the statement made through your columns, that there was nothing in the movement beyond a desire to get scattered properties into such a shape that they could be handled. As a matter of fact, the project fell through, and is therefore hardly worth discussing; but if it had been successfully carried out, it would have made but a small hole in the market. There are many thousands of acres of first-class coal lands yet to be had for money at low rates and on easy terms, as investors may readily enough ascertain by making application for some.

It is with heartfelt satisfaction that I observe signs of regeneration in Kentucky! The Louisville Courier-Journal throws up the sponge in the tariff fight, and the town of Winchester, in the heart of the blue-grass region, is to have a progressive paper to be called the "Industrial Kentuckian." It is to be conducted by the Hon. Thos. G. Stuart, whom I used to know as one of the brightest among the younger members of the legislature at Frankfort. If the people of the State are not stirred up to do something more than has been their wont for the development of the rich resources of the Commonwealth, it will not be his fault. But returning to the tariff! The free trade organs unite in the assertion that one of the chief causes of defeat this session has been the strong pressure brought to bear upon Southern Congressmen by their industrial constituents. This new political force of Southern protection sentiment is a mule that never kicked the free traders before, and they have hardly yet awakened from their surprise at the location and strength of its heels. It is very plain that the entire pro-British party is sadly demoralized, and, in view of the attitude of the united labour organizations, I think it doubtful if the present tariff stands in much danger for several years to come. All the same, the Southern people interested in proper protection to native industry should not take any such thing for granted. Tariff revision would put billions into the pockets of British manufacturers, and we may be sure that the astute class in question will not hesitate to spend money to keep up the agitation while there is a ghost of a show for free trade. Again, we are not out of danger from the whisky lobby. It is true that if we are to have a ship railway across the isthmus, a decent navy, and anything like respectable coast and harbor defences, the customs and the internal revenue together will not produce more than a fairly liberal Congress could appropriate any day in the week; but this perhaps applies only to the present. By and bye, when we have the defences and the navy, there may be too much money in the public pocket, and then once more we shall have to meet the question of reduction of revenue. If at such a time the internal revenue system should be still alive, then protection will be in danger. It cannot be otherwise than in constant danger while there is a vestige of the internal revenue system left. We ought to manage in some way to abolish internal revenue before the free traders recover from their present surprise enough to give us another whirl.

G. B. WEST.

The American Exposition.

[Special correspondence MANUFACTURERS' RECORD.]

NEW ORLEANS, March 27, 1886.

There has been no time since 1876 when people who attended the Philadelphia Centennial have had the chance to see, as they can here, what immense progress has been made in glass and pottery production since then. But Ohio, whose little association of ladies sent some beautiful specimens of their work to Philadelphia, has here a great display from her potteries, showing not only the more common wares, but also many tables filled with choice specimens of the ceramic art. The lessons taught in 1876 have enabled New Jersey, Ohio and some other States to put on exhibition here wonderful evidences of their ability to compete with European manufacturers in the successful production of the finest wares. Arkansas, Alabama, and several other Southern States, have exhibits of clays and sands equal to any found in New Jersey or Ohio for the production of porcelain and glass, and to those who understand the business and have the capital to prosecute it they offer every facility for establishing such manufactures.

One day when Professor Wm. P. Blake, of New Haven, Conn., was here, making as thorough an examination of the mineral exhibits as his limited time would permit, he suddenly stopped before an assayer's furnace, in the special Colorado collection. "Where did this come from?" he asked the commissioner. "It was made in Denver," replied the latter. "We are furnishing them to all the regions around us." "This," said Professor Blake, "is a real advance. We have always imported these from England, but this is superior to any I have ever seen." And the professor made a note of the manufacturer's address, that he might order one to be shipped to a mining district in Arizona, whither he was bound.

New England—Connecticut excepted—has fine displays of the varied industries of that section, but those of Maine and Vermont have excited greater interest than the others, because each State has many natural products peculiar to itself, while Maine in its lumbering and shipbuilding, and in their subsidiary industries, has been able to make a peculiarly unique display. Last year the commissioner in chief of Mexico gave Commissioner Ham an order for ten pounds of the spikes that Maine loggers wear in their boots, he wishing to have them tested in his own country by mountaineers. This trivial instance is simply an illustration of the unexpected that continually happens at national and international exhibitions.

THE TEXTILE INDUSTRY

North and South, as exemplified in these buildings, has a significant lesson for the manufacturers of both sections. The displays of cotton goods in both the Government and Main Buildings, taken as a whole, cover nearly every style of fabric produced in the United States, from the coarsest yarns to the finest muslins. It was once fondly believed by Lowell and Manchester men, that while the South might successfully make yarns and coarse domestics, she never would be able to compete with New England and Philadelphia in the manufacture of higher grades. But when the Cotton Spinners' Association went to Atlanta in 1881 and saw the products of Southern looms, they were compelled to modify their views. There one of the most eminent authorities on such subjects, a Northern gentleman who is entirely free from anything like sectional bias, but who still held to the opinion that the South could not catch up with the North in the manufacture of textiles, wrote words of friendly advice to the former, to the effect that they could not for many years hope to make large mills succeed, but that small neighborhood mills, consuming the cotton grown immediately around them, were the thing for the South. On the strength of this advice many such mills were started, and most of them as they

made money put part of their profits into an increase of their plants, so that in the course of time there will be many more large establishments in this part of the country than there would have been had no such advice been given. Meanwhile the great establishments at Graniteville, Augusta and Wesson have kept on as though there were no New England in existence, and give every sign of continued prosperity. The Mississippi Mills, located at Wesson, occupy a large square in the Main Building. Besides cottonades, osnaburgs, sheeting, shirting, drilling, checks, plaids and toweling, which are shown in great variety of style and quality, they have also a full line of their cassimeres, doeskins, linseys, tweeds and jeans. These mills, in the heart of a State that until recently was generally supposed to be destitute of all enterprise, are a proof of what can be done at the South, and, indeed, of what the people of that section have already accomplished. These exhibits, as well as those of the iron regions of Alabama and Tennessee, are in themselves strong

ARGUMENTS FOR PROTECTION.

That they are appreciated will soon be learned by whoever will converse with the gentlemen having them in charge. In fact, the growth of the protective sentiment in this section is even more rapid than its manufacturing development. Owners of properties which they wish to have utilized have come to understand that if protection could be absolutely assured for a term of years there would be much greater progress than at present, and a feeling of intense dislike against free trade politicians and advocates has been aroused that will soon be thoroughly understood by Southern Congressmen, if by no one else. As an old man from North Alabama expressed it the other day, "any Congressman that puts a block in the way of protection will get run over."

THE WORLD'S COMMERCE.

and our relations thereto, are admirably portrayed in a series of object lessons near the center of the Main Building. Mr. Charles S. Hill, of Washington, who resigned his position in the Department of State that he might give his time wholly to the obtaining of a Consular and Diplomatic exhibit, has arranged this display with an intelligent appreciation of the kind of information American business men need. In his letter to President McConico announcing its installation, Mr. Hill said:

The purpose of this exhibit is to demonstrate the valuable information officially communicated and published in the monthly Consular Reports, a copy of which will be given gratuitously, and mailed regularly to anyone appreciating and desiring these commercial magazines, if request is made with written address.

The feature of this exhibit is in harmony with the Exposition, hemispherical, divided in illustration and contrast between the old continents of Europe, Africa, Asia, and Australasia, and the new continents of America; presenting the marked characteristics in trade under the Consular Corps in its commercial work, and in social association under the Diplomatic Corps in its ethical duty, with a view to encouraging our home labor, and to finding foreign markets for our surplus commerce, where a demand exists; and by such official information through these channels, to aid our export trade, and to protect and guide our agriculturists and manufacturers, by illustrating the sorts, styles, quantity and quality of goods or products wanted in the different parts of the world. It is therefore a purely technical school for the tradesman and economist. This labor was begun in 1880, through a meager appropriation of Congress for the editing and publishing of the Consular Reports, which interesting matter and knowledge, had, previous to that time, been confined in the department's archives, or printed two years after date, without proper editing and verification.

After further explanations and citations from many influential papers and writers, Mr. Hill concludes his letter as follows:

The Consular and Diplomatic Service constitutes a force unequalled in serviceability, accuracy, promptness and economy, in obtaining the truest data, and best matter of interest in giving to our people of every class, whether the laborer, the capitalist, the home merchant or the foreign exporter, the student or the traveler, information and means of developing a genius for invention, modelling or designing, as well as in developing American labor at home, and disseminating American trade abroad, if carried in American ships.

The peculiar difficulty in preparing this exhibit however, is from the unavoidable delay in receiving such samples of industry from the furthest parts of the world, and from the multiplicity of small characteristics of local trade rendering it very expensive to catalogue in detail. The continual arrival of many, and more diversified illustrations, will add also monthly to its value and interest, and serve particularly in affording means for distinguishing the genuine from the imitation article or trade mark, as well as comparing the tastes, conditions, and progress of every nation.

Mr. Hill was more than right in anticipating great delays in the arrival of goods from abroad. Every mail brings him advices of fresh shipments, and it is not at all improbable that many will be received after this Exposition shall have closed. But be that as it may, it is beyond question that this unique collection, drawn from all quarters of the globe, is, for the purposes intended, one of great value to every productive and commercial interest. It ought to be exhibited at all our great commercial and industrial centers and then placed in the National Museum at Washington, and added to from year to year through the efforts of the United States consuls in all parts of the world.

It would be doing rank injustice to fail to say a word or two in commendation of those progressive citizens of New Orleans, who, without other inducements than an ardent desire to help forward our trade intercourse with Latin America, have given freely their money, time, talents and energies to make this Exposition a success. All that men could do, more than most men would have done, they have done cheerfully. President McConico, Director Generals S. H. Buck and B. D. Wood, the editors of the Times-Democrat, Picayune and States, and many others, have labored assiduously and spent their money freely in this endeavor. Although they have not met with financial success, they have demonstrated by the grand work of the last three years that the tremendous energies which the South put forth during the war, its people are now applying to secure "the greater victories of peace."

B. S. P.

THE BALTIMORE MANUFACTURERS' RECORD is one of the best publications of the day, and has a large circulation in the South. It is doing a great deal toward the development of the resources of this section.—Nashville (Tenn.) Banner.

If you wish to keep posted on the progress of the South, read the MANUFACTURERS' RECORD. Price \$3.00 a year.

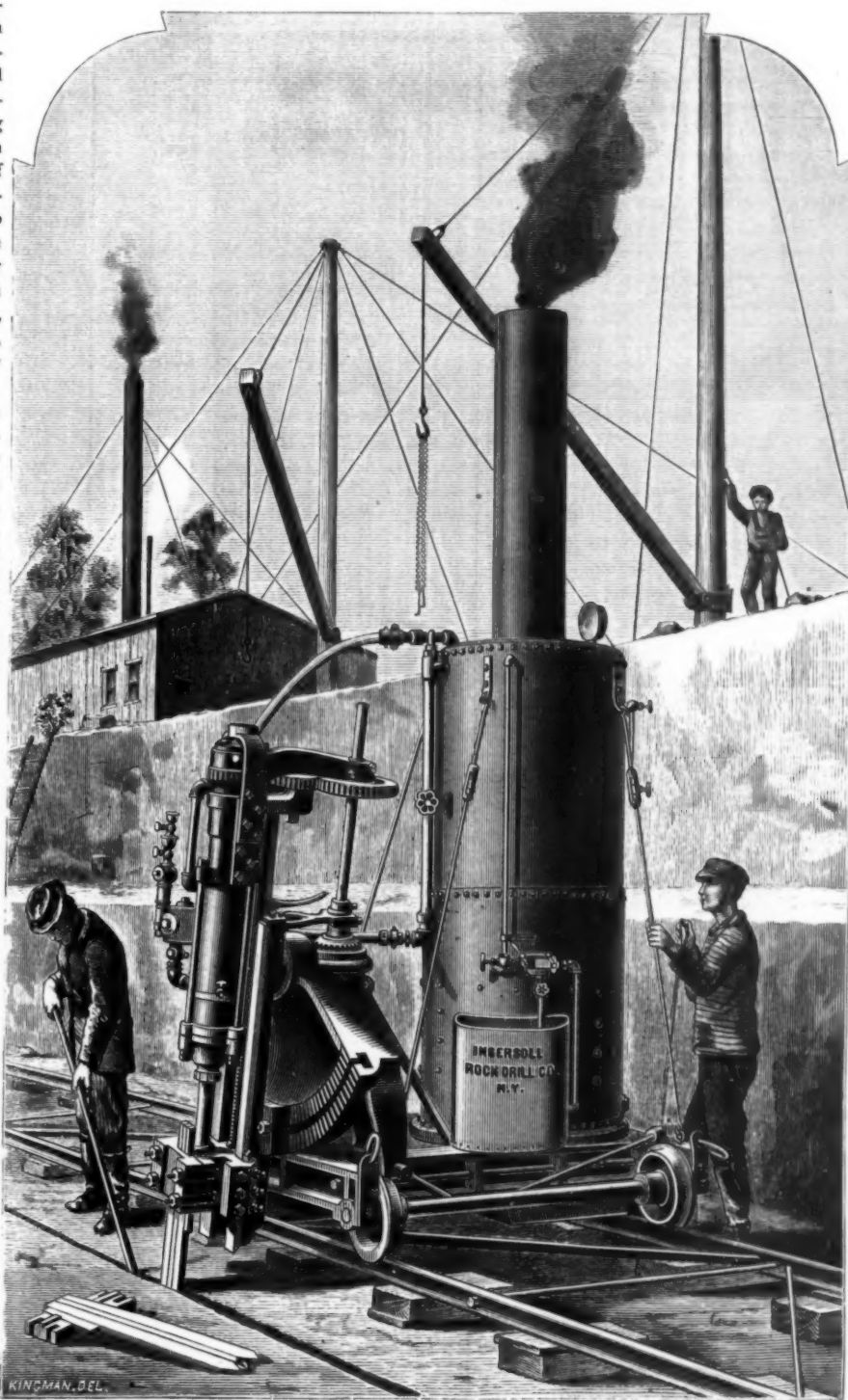
Improved Stone Channeling Machine.

Blasting plays an important part in the quarrying of stone for burning lime, for road-bed ballast, rubble, street pavement, and is still resorted to in slate quarries; but in that important industry, the quarrying of dimension stone, the blast is now seldom heard, and the channeling process is daily growing in favor. This process consists in cutting long, narrow channels or deep grooves along the floor of the quarry, for the purpose of freeing the sides of the blocks of stone to be taken out. After the channels are cut to the required depth, and a free face obtained along one of the cuts, the next step,

the one most generally used, and will serve to illustrate the principle.

It is thus seen that the channeling process is not, as it is popularly supposed to be, a complete cutting out of the stone in blocks; but it is a means by which artificial seams or beds are produced in positions most favorable for the action of the wedges or plugs and feathers.

The accompanying illustration represents an improved channeling machine, recently introduced by the Ingersoll Rock Drill Company, of New York, the engraving being made from photographs taken at the Ohio Sandstone Quarries, which have not been slow to adopt this improvement. The apparatus consists of a direct acting engine,



THE INGERSOLL STONE CHANNELING MACHINE.

if there are no free beds, is to release the mass at the bottom. This is done by means of a "gadder," and consists in drilling or "gadding" a series of horizontal holes along the bottom of the bench, and in line with the new floor, and then releasing it by the splitting action of wedges, or "lofting" it, as it is called by quarry men.

After the bench is thus raised from its bed in mass, it is next split into blocks of the required thickness or dimension by means of wedges or plugs and feathers. The process of cutting up the blocks after the channels are made varies somewhat in the different quarries, according to the nature of the stone, but the method above described is

having the piston and valve of the standard Ingersoll "Eclipse" drill, with a gang of cutting tools attached to a crosshead which is fixed to the piston rod, the whole mounted in a vertical position upon an adjustable support, fixed to a carriage which moves automatically upon a portable track laid alongside of the cut about to be made.

This machine is direct acting, that is, the cutting tools being attached rigidly to the piston, the blow is dealt directly by the steam pressure in the cylinder and without any intervention of crank shafts, levers or springs. The feed motion of the carriage upon the track is operated by and dependent upon the engine which strikes the blow

This is the only direct acting channeling machine which possesses this feature.

This feed motion is imparted to the car on the upward stroke of the piston only; the car remains stationary when the blow is struck. This feed averages three-quarters of an inch per stroke. The strokes average 240 per minute.

As the cutting tools are made adjustable to any angle to the right and left, and forward and backward, the machine is capable of making transverse and side hill cuts, and does what is known as cutting out the corners in quarrying. The machine has but two quick moving parts—the piston, with cutting tools attached, and the valve. The stroke varies about six inches in length, running from two to eight inches. This is accomplished without extra parts or mechanical adjustment. The machine will start with a stroke of three inches, and continue operating without attention until the cut is five inches deep. The engine and cutting tools are fed downward as the cutting proceeds, and the drills can cut a channel eighteen inches in depth without unclamping or stopping the machine. There is but one clamp or chuck for the drills, there being no upper clamp. Thus, the drills are short and handy for use in the shop and while being changed in the cut. By a stop valve placed in the lower steam port, the blow can be regulated so that it will strike with only a light touch or with a blow of 3,000 pounds in force. As the machine is light in weight, and occupies but little space, it can be used in a chamber where the distance between the floor and the roof is but six feet.

The boiler is of an improved design made specially for the purpose, with submerged flues, and has a water tank attached, from which the boiler is fed by means of an injector.

The efficiency and stability of this apparatus have been sufficiently tested and demonstrated by work in all kinds of stone. It has been most successfully used by the Vermont Marble Company, of West Rutland, Vt.; the Green Serpentine Marble Company, of Conowingo, Md.; by the Atlantic Stone Company, of La Grange, Ohio, and at many other well-known quarries. The average capacity of the machine in various kinds of stone is given as follows: In marble, 80 to 100 square feet of channel cut in ten hours; in limestone, 120 to 150 square feet; in sandstones, 150 to 200 square feet; in granite, 40 to 60 square feet. The machine has already made a record of 260 square feet in sandstone and 230 feet in limestone in a day of 10 hours.

[Special correspondence MANUFACTURERS' RECORD.]

CHARLOTTE, N. C., March 29, 1886.

With average white cotton, used in dyeing mills, at about $8\frac{1}{4}$ to $\frac{3}{8}$, and a better demand for plaids, the Southern factors are in rather a better state of business mind than at this period last year. A very marked feature of present inquiries is the application of nearby merchants, who distribute to the interior more largely now than for the past decade. The ordinary checks and plaids made in this section, and which heretofore found only markets in the Middle and Western States, are more favorably looked upon since improvements in machinery and more skilled labor are bringing them up to the standard of the New England "ordinaries," with a material difference in price in favor of the South. The idea of "buying elsewhere" is dying out here as well as in the industrial districts of other parts of the country, and when this more sensible view shall be taken by all, the South will have no goods to spare for beyond its borders. Home consumption necessarily increases local capital, makes better wages and begets enterprise. From all indications, the spring outlook is favorable, and the low price farmers received for their last crop of cotton will be made good by a better market the coming season.

F. A. S.

PRICE & LOOFMAN, Ringwood, N. C., want prices of cotton gins.

CONSTRUCTION DEPARTMENT.

WE PUBLISH, every week, a list of every new factory, of whatever kind, projected anywhere in the South; every railroad undertaken, and every mining company organized. This information is always fresh, and, by enabling manufacturers to correspond with the projectors of such enterprises before their supplies of machinery have been purchased, is of great value. Manufacturers will find it to their interest to read this department carefully each week.

ALABAMA.

The Birmingham Street Railway Co., Birmingham, Ala., have increased their capital stock to \$60,000. They are extending their road and will build a two story stable 60x150 feet.

A saw mill is being erected near Andalusia, Ala., by J. A. Prestwood.

Smith & Eastman are developing an iron ore mine 13 miles from Birmingham, Ala., and will also mine white sand.

The Pratt Coal & Iron Co., Birmingham, Ala., previously reported, have commenced work on 250 new coke ovens, and will, it is said, erect 250 more as soon as the others are completed.

The Woodward Iron Co., Wheeling, Ala., will hold a meeting April 7, to consider the question of increasing their capital stock to \$1,000,000.

H. S. Palmer, of Chattanooga, Tenn., has started the manufacture of artificial stone, at Huntsville, Ala.

It is stated that a Michigan capitalist will erect extensive lumber mills near Tuscaloosa, Ala. A street railway company is being organized, and a compress is projected at the same place.

The Calera Land Co., Calera, Ala., at a meeting, March 25, decided to issue bonds to the amount of \$150,000, to be used in the development of their property.

The Elyton Land Co., Birmingham, Ala., are erecting a building, which will be used by Mr. Coleman, of New Orleans, La., as a machine shop, for manufacturing sugar cane mills.

Henry F. de Bardeleben, of Birmingham, Ala., Robt. Adger, I. Ellison Adger, David Roberts, Moses E. Lopez, Jos. S. Murdock, Augustine T. Smythe and Jno. H. Murdock, of Charleston, S. C., W. S. Manning, of Spartanburg, S. C., Geo. S. Brown, of Baltimore, Md., Collin C. Wyllie, Jno. F. Gordon, Alfred Parish, Dillwyn Parish and E. H. Watts, of London, Eng., have incorporated at Birmingham, Ala., the de Bardeleben Coal & Iron Co., capital stock \$2,000,000, to do a mining, manufacturing and industrial business. The material for erecting two furnace plants at Jonesboro will soon be purchased. It is proposed by the company to erect a steel plant also.

J. N. Wade is erecting a grist mill at Town Creek, Ala., and W. C. & J. C. Bracken will erect one.

Milner, Caldwell & Flowers, Bolling, Ala., will build a large saw mill near Mobile, with a capacity 8 1/2 M feet per day.

FLORIDA.

J. F. Kehoe has purchased machinery for a saw mill which he will erect at Blackwater, Fla.

Mr. Minchener, Lane Park, Fla., contemplates erecting a wagon, carriage and furniture factory.

C. J. Chittenden is erecting a mill near Oviedo, Fla.

J. A. Cloud, Jacksonville, Fla., is corresponding with parties in Pensacola, Fla., in regard to the establishment of an electric light plant.

D. S. Williams is president; G. M. Lee, vice-president; George W. Brown, secretary, and J. M. Blair, treasurer of the Ocala Fertilizer Co., Ocala, Fla., previously reported as incorporated. A site has been purchased, and works will be built.

Thomas G. Eaton, reported last week as having made a proposition to build gas works at Sanford, Fla., will erect the works and have them in operation by December 1.

GEORGIA.

J. W. Baum, J. H. Mecaslin, Walter A. Taylor, E. E. Howard, J. W. English and others have incorporated at Atlanta, Ga., the Southern Box Factory, to manufacture boxes, buckets, barrels, &c.

It is reported that John D. Heard, Danbury, Ga., will start a factory for manufacturing agricultural implements.

Lee & Wichart are erecting a new mill two miles from Allapaha, Ga.

B. B. Gray & Bro., Allapaha, Ga., are extending their tram-road several miles.

The Perkins Manufacturing Co., Harrison, Ga., are building a planing mill, shingle mill, and sash, door and blind factory.

W. J. Joyner will soon enlarge the capacity of his planing mill at Tennille, Ga.

W. A. Davis, Halcyondale, Ga., is rebuilding his saw, grist and planing mill, previously reported as burned.

KENTUCKY.

William McNamara, Ernst Semple, Samuel Woodside and J. W. Sealts have incorporated at Covington, Ky., the McNamara Tobacco Co., capital stock \$50,000, to manufacture tobacco.

Fanny Speed will erect a six-story brick building at Louisville, Ky., at a cost of \$35,000.

J. L. Allan will add a saw mill to his grist mill at Allansville, Ky.

C. W. Russell, of the Red River Iron Works Manufacturing Co., Red River Iron Works, Ky., has leased the Estill Furnace property at Furnace, Ky., and will put the furnace in blast during May.

G. W. Adams & Co., Lexington, Ky., have fitted up a mill with machinery for manufacturing spices and baking powders.

The Collins & Rudy Lumber Co., capital stock \$60,000, has been incorporated at Maysville, Ky., by H. H. Collins, John R. Rudy and John I. Stansbury.

LOUISIANA.

Madison Parish, La., in addition to erecting the \$7,000 jail at Tallulah, previously reported, will build a \$21,000 court-house.

It is rumored that the Union Oil Co., New Orleans, La., will build works at Algiers.

MARYLAND.

W. Klipstine will move his steam saw mill from Bloomington to Frankville, Md.

E. P. Covey will, it is said, erect a phosphate factory at Federalsburg, Md.

The McCarty Fer Hydric Gas Co., office at 430 Walnut street, Philadelphia, Pa., contemplates erecting gas works at Hagerstown, Md., and Washington, D. C.

Wilbur Eliason has leased the mill of the Chestertown (Md.) Strawboard & Manufacturing Co., and will add new machinery, doubling the capacity.

A bill has been introduced in the Maryland legislature to incorporate the Citizens Gas Light Co., of Cumberland.

Reinle Bros., Baltimore, will put a new 75 horse-power boiler and engine in their show case factory.

George F. Patterson, Baltimore, is organizing an electric light company to use the Thompson-Houston system.

MISSISSIPPI.

The Vicksburg Street Railroad Co. have commenced work on their road at Vicksburg, Miss.

NORTH CAROLINA.

J. C. Monach contemplates starting a steam laundry at Goldsboro, N. C.

The Fayetteville Ice Manufacturing Co. has been formed at Fayetteville, N. C., with J. B. Starr as president. An ice machine has been purchased and will be erected at once. The daily capacity will be about 5 or 6 tons.

J. S. Atkins will erect a saw mill at Albemarle, N. C.

R. A. Threatt and J. E. Carelock, Monroe, N. C., are erecting the machinery for the chair factory previously reported to be started.

Scott, Donnell & Scott, Graham, N. C., previously reported as having sold their cotton factory to L. Banks Holt, have purchased a site for the erection of buildings for manufacturing purposes.

John I. Beggs, J. Wallower, Jr., Thomas H. Heist and W. T. Hildrup, Jr., of Harrisburg, Pa., have bought the Rudisill Gold Mine at Charlotte, N. C., for \$40,000, and with E. Z. Wallower, of Harrisburg, and T. C. Dunn, of Charlotte, incorporated the Rudisill Mining & Milling Co., capital stock \$200,000. New machinery will be added to increase the mining capacity.

Hoisting machinery is being erected by the Uwharrie Mining Co. at their mine in Randolph county, N. C., and a stamp mill will soon be put up.

The North Carolina Talc & Mining Co., will open mines near Jarrett, Swain county, N. C., at once, and erect mills for grinding the talc. Will also erect several lime kilns.

A. F. Lucas has purchased machinery, which he will erect at the Todd mine, five miles from Charlotte, N. C., to develop it.

Hilton & Erwin have erected machinery at their mills at Charlotte, N. C., to manufacture shuttle blocks. The capacity is 1,000 blocks per day.

It is stated that the Rock Creek Manufacturing Co., Curtis' Mill, N. C., will move their cotton mills to Gibsonville.

William Mangum, Durham, N. C., has purchased carding machinery which he will erect and operate at his saw and planing mill.

The Hickory Manufacturing Co., Hickory, N. C., have recently added new buildings and machinery to their works, and J. C. Fry & Co. have added a grist mill to their lumber mill.

The Piedmont Wagon Co., Hickory, N. C., have recently erected a brick building for an engine and boiler room and machine shop, and have placed some new machinery in their factory.

Mr. Robinson will, it is stated, erect an electric light plant at Charlotte, N. C., by May 20.

W. L. Holt and Edwin C. Holt will erect a new steam cotton mill at Company's Shops, N. C.; 100 looms and 2,000 spindles will be put in.

SOUTH CAROLINA.

Knight & Bruner, Harleyville, S. C., have put additional machinery in their saw mill.

TENNESSEE.

The American Wire Hoop Co., capital stock \$250,000, has been organized at Jackson, Tenn., with L. J. Brooks as president and D. L. Murrell, secretary.

The Memphis Thompson-Houston Electric Light Co. has been chartered at Memphis, Tenn.

It is said that W. H. Brown will start a handle factory at Greeneville, Tenn., soon.

Hunt & Ames will erect a grist mill at King's Point, Tenn. Have purchased the machinery.

David N. Coil is erecting a steam saw and grist mill near Beaver Creek, Tenn.

A stove factory is being erected near McKenzie, Tenn., by Moore & Co.

The Equitable Gas Light Co., capital stock \$500,000, reported last week as organized at Memphis, Tenn., with Thomas H. Milburn as president, will build works.

The South Tredegar Iron Co., Chattanooga, Tenn., have completed the erection of a Bessemer steel plant with a capacity of 50 tons.

A fruit canning factory will be erected at Chattanooga, Tenn., it is stated.

The Bon Air Coal, Land & Lumber Co., Nashville, Tenn., expect to build a railroad to their coal lands in White county, and open mines with capacity of from 30 to 50 cars of coal per day. The company own about 12,000 acres.

The stockholders of the Pioneer Cotton Mill, Memphis, Tenn., have reorganized and will start the mill up soon. \$35,000 worth of bonds will be issued, the proceeds to be used as working capital.

Gilbert & Whitsett are erecting a planing mill at McKenzie, Tenn.

John H. Ferguson, Dayton, Tenn., has leased iron-ore lands near Spring City, Tenn., and will open mines to develop them.

Grant & Son, proprietors of the sash and blind factory at Johnson City, Tenn., have with others organized the Johnson City Furniture Co., capital stock \$20,000.

It is said that William Slawson and Mr. Hart will build a foundry and machine shop at Dayton, Tenn.

John W. Wells has started a brick-yard at Chattanooga, Tenn.

J. T. Wilder is opening a new iron ore mine at Roan Mountain, Tenn.

Henry Clark, Henry F. Dimmock, Watson H. Brewer, A. P. Bollar, W. F. Taylor and others have incorporated at Memphis, Tenn., the Memphis Bridge Co., to build a bridge across the Mississippi at Memphis.

TEXAS.

Shields, Booth & Clayton are developing a coal mine near Bowie, Texas.

The Kennendale Brick Co. has been formed at Fort Worth, Texas, with K. M. Van Zandt as president, to manufacture brick extensively.

It is stated that Byron Bunker will erect a new mill at Saledo, Texas.

R. W. Kendel, previously reported as to organize a company at Weatherford, Texas, to manufacture castor and other oils, has, with G. M. Bowie, H. P. Hilliard and others incorporated the Weatherford Castor Oil Co., capital stock \$25,000.

The contract for erecting the school building at Hillsboro, Texas, previously reported, has been let to Hughes & Boswell, at \$10,240.

LOCKWOOD, GREENE & CO. MILL ENGINEERS

Office, 65 Westminster St., Providence, R. I.,
Carefully prepared plans, specifications and estimates furnished for the construction, equipment and organization of new mills and the revision and improvement of old.

The Dallas Cooperage Co., capital stock \$50,000, has been chartered at Dallas, Texas, by F. M. Cockrell, Thomas F. McEnnis, F. G. Moore, George J. Dexter and Robert Gibson.

Groscup, Keath & Capel will erect an ice factory at Abilene, Texas, and have it in operation by May 15.

Ed. Aber will shortly erect a planing mill and furniture factory at Troupe, Tex.

L. Craddock, W. L. Hall, D. M. Clower, W. S. Simpkins and J. M. Wendelkin have incorporated at Dallas, Texas, the Electric Light & Manufacturing Co., capital stock \$35,000.

John Nugent, J. J. Burke and G. W. Britton have incorporated the Coalville Coal & Mining Co., capital stock \$10,000, at Palo Pinto, Texas.

Mike Butler, Austin, Tex., has purchased \$10,000 worth of new machinery for his brick yard.

VIRGINIA.

Norris Bros. have built an addition to their planing mill at Leesburg, Va., and will put in some new machinery.

Staunton, Va., will purchase a new pumping engine for their water works at a cost of about \$7,000.

E. C. Vincent will move his fence factory from Staunton to Richmond, Va.

A husk and mattress factory is to be started at Claremont, Va., by Charles Hammond.

Ward & Steinberger will build a large sash, door and blind factory at Claremont, Va.

WEST VIRGINIA.

The Newburgh Orrel Coal Co., office at Baltimore, Md., have purchased a large tract of coal land near Houlttown, W. Va., which they will develop at once.

J. M. Guffey & Co. are preparing to drill several gas wells on their lands near Cameron, W. Va. They will pipe the gas to Wheeling.

BURNED.

The saw mill of the Calera Land Co., Calera, Ala., damaged several thousand dollars by explosion.

The blacksmith and machine shops and coach sheds of the Louisville & Nashville Railroad, New Orleans, La. The loss is reported as \$20,000.

The Magnolia flour mills at Sherman, Texas, owned by Stinnet & Rucker. Loss on mill is \$24,000.

Anderson & Lawrence's mill in Chattooga county, Ga. Loss \$3,500.

The gin of M. H. Wilson, Chambers, Ala.

A large fire, March 30, at Key West, Fla., destroyed over \$1,000,000 worth of property, including several cigar and cigarette factories.

H. E. & G. Faber's cotton factory at Prattville, Ala., wrecked by flood. The loss is said to be \$85,000.

Hoop Factory.

GAINESVILLE, GA., March 25, 1885.

Editor Manufacturers' Record:

We are building a coiled hoop factory at this point, and are now putting up the machinery. The capacity will be from 6,000 to 7,000 per day. I believe this is the first enterprise of this kind in our State. The style of the firm will be Jennings & Co., but the writer is business manager and will run the concern.

E. P. CHAMBERS.

Enlarging Foundry and Building New Factory.

BALTIMORE, March 31, 1886.

Editor Manufacturers' Record:

We are rebuilding and enlarging our iron and stove foundry. We are also building a three-story factory in connection with the same.

S. B. SEXTON & SON.

Another Cotton Mill.

COMPANY SHOPS, N. C., March 30, 1886.

Editor Manufacturers' Record:

We expect to build a new steam cotton mill at Company Shops, N. C. Expect to put in 2,000 spindles and 100 looms. My brother, Edwin C. Holt, will be my partner.

WALTER L. HOLT.

Grist Mill.

CHARLOTTESVILLE, VA., March 26, 1886.

Editor Manufacturers' Record:

Our grist mills are in operation, and we expect to add flour mills, full roller process, by 1st of August.

ANDREWS & ELSOM.

Grist and Saw Mill.

AUBURN, ALA., March 27, 1886.

Editor Manufacturers' Record:

I am putting up building for a grist and saw mill, and will put up a gin. Think I will start about the first of June.

T. B. TURNER & CO.

Furniture Manufacturing Co.

JOHNSON CITY, TENN., March 26, 1886.

Editor Manufacturers' Record:

Our new organization is named Johnson City Furniture Co., capital \$20,000. Will manufacture furniture principally; also sash and doors.

GRANT & SON.

Flour Mill.

FARMINGTON, N. C., March 27, 1886.

Editor Manufacturers' Record:

We are building a flour mill; will order the mills in a few days. Have already put up boiler and engine of 50 horse-power. We hope to be ready to start up by the first of June.

A. W. ELLIS & CO.

A Planing Mill and a Stave Factory.

McKENZIE, TENN., March 26, 1886.

Editor Manufacturers' Record:

Messrs. Gilbert & Whitsett are putting in a planing mill at this place; and Moore & Co. are putting up a stave factory near here. Northern emigrants are coming in freely and land is on a boom.

CANNON & JACKSON.

Grist Mills.

TOWN CREEK, ALA., March 27, 1886.

Editor Manufacturers' Record:

There is one grist mill already started and one under way, which will be started soon. One is by J. N. Wade and the other by W. C. and J. C. Bracken.

J. H. HOUSTON.

Ice Factory.

ABILENE, TEX., March 24, 1886.

Editor Manufacturers' Record:

An ice factory is to be erected here by Messrs. Grosscup, Keath & Capel. Will be in operation by May 15, 1886.

H. H. HARDEN.

MONTGOMERY, ALA., March 27, 1886.

Editor Manufacturers' Record:

We are about to erect a compress at Montgomery as a sample of the compresses that we are about to build and have for sale before July 1st. It is all iron and steel. We have not decided yet if we will manufacture them here or give contract to some mills elsewhere. We have a cash capital of \$500,000. We have already sold in the last three weeks seven presses. Montgomery will be headquarters for our enterprise.

JOSEPH GABOURY & CO.

BALTIMORE, MD., March 29, 1886.

Editor Manufacturers' Record:

I am engaged in organizing an electric light company to use the Thompson-Houston system.

GEO. F. PATTERSON.

Coal Lands To Be Developed.

NASHVILLE, TENN., March 26, 1886.

Editor Manufacturers' Record:

The Bon Air Coal, Land & Lumber Co. expect to build a railroad to their coal lands this year and open mines with capacity of 30 to 50 cars of coal per day. They are now seven miles from the terminus of the McMinnville Branch Railroad. The directors expect to have the road under contract within sixty days.

W. MORROW.

MOUSE CREEK, TENN., March 25, 1886.

Editor Manufacturers' Record:

We have commenced sawing marble. It is of a dove color, receives a smooth polish, and is classed by some as lithograph stone. The cotton bat factory near Mt. Verd is doing good work. This company will improve their water in a short time, but the work will not interfere with the running of the factory. The Sweet Water Flour Mills are said to be the finest in the South. The great demand for their brands of flour is an evidence of its superior quality. John B. Whitman, Sweet Water, Tenn., is general manager.

P. N. SHULTZ.

\$500,000 Gas Light Company.

MEMPHIS, TENN., March 25, 1886.

Editor Manufacturers' Record:

Equitable Gas Light Co. is organized with \$500,000 capital. It is our intention to build works.

J. KATZENBERGER, Sec'y.

Doubling Capacity.

CHESTERTOWN, March 27, 1886.

Editor Manufacturers' Record:

I have leased the Chestertown Strawboard & Manufacturing Co's Mills, and intend to double our old actual capacity by adding rotary globes, beaters, &c.

W. ELIASON.

Gas Works.

PHILADELPHIA, PA., March 30, 1886.

Editor Manufacturers' Record:

The McCarty Fer Hydric Gas Company is now organized and contemplates erecting immediately works at Hoboken, N. J., Washington, D. C., Cleveland, Ohio, Bel-fount, Pa., Bridesburg, Pa., Hagerstown, Md., &c. By this process gas is made from hydrogen—burnt in incandescent tips, giving 21 candle power—costing about 20 cents per M to the public. The heating gas will be equivalent to coal at \$1.75 per gross ton.

WM. M. McCARTY.

CHARLOTTE, N. C., March 29, 1886.

Editor Manufacturers' Record:

I and others have bought the Rudisill Mine. We know this mine to have been one of the best in the South, and we propose to develop it as far and as fast as an ample cash capital will enable us to do it.

THOMAS C. DUNN.

CEDAR KEY, FLA., March 27, 1886.

Editor Manufacturers' Record:

The Cedar Key Ice Manufacturing Co. has a capacity of ten tons per day, devoted to local fish and oyster trade. Are now engaged in boring an artesian well for factory use; down 675 feet and no water yet.

B. COACHMAN.

MINING NOTES.

By T. K. BRUNER, Salisbury, N. C.

NEW FIND IN RANDOLPH COUNTY.

The new find in Randolph county, near the Montgomery county line, promises to be a big thing. A cross-cut is being made and a distance of 18 feet fails to reach the opposite, or hanging wall of the vein. The ore is a solid mass of slate and quartz, and is said to show gold all the way.

GOLD HILL.

Two English gentlemen arrived last week at the Gold Hill Mines, in Rowan county, and will assume immediate control of the bookkeeping and underground work. Mr. Julian is in charge of the former and Mr. Wm. Nance of the latter. Two other "boss" workmen, carpenter and smith, are expected to arrive soon. Mr. A. C. Manney is retained as superintendent. At the

UWHARRIE MINE.

in Randolph county, they are building house for hoisting works. The stamp mill will go up next, then some buildings for operatives. They think the prospects most flattering for successful mining.

BRINDLETOWN DISTRICT.

in Burke county, is becoming active again, though only in a small way at present. The miners have been panning in the gulches since spring opened and are reported as making fair wages. The superintendent reports that the "Carolina Queen" is to be opened again. The Carolina Queen is owned by Boston capitalists, and the superintendent has recently visited that city in the interest of the property. It is a placer mine.

TODD MINE.

situated near Charlotte, is to be opened by Mr. Lucas. A prospecting shaft, 25 feet in depth, has been sunk, and Mr. Lucas proposes to investigate further. A small engine and hoisting machinery are being set up for this purpose.

RUDISILL CHANGES HANDS.

The Rudisill, probably the most famous mine in Mecklenburg county, changed hands on last Thursday, the 25th instant. It was bought by a party of Harrisburg (Pa.) capitalists as follows: J. I. Beggo, J. Wallower, Jr., T. H. Heist and William T. Hildrutt. They paid \$40,000 for the property, payments to be made in installments.

The Rudisill Mining & Milling Co. was thus organized, and the new company will go immediately to work. New ground is to be opened at once and some additional machinery will be placed. A working capital of \$10,000 has been paid in to start with. The ore at this mine is a heavy sulphuret, and of late years has been shipped for reduction.

The St. Catherine Mine, near Charlotte, has reached a depth of 400 feet, and they are hoisting a good grade of ore from that depth.

STANLY COUNTY MINES.

The list below embraces all of the more important mineral localities in Stanly county. Distance and direction reckoned from Albemarle, the county seat:

Barringer—10 miles northwest.
Biles—7 miles northeast.
Crowell—9 miles northeast.
Cucumber—15 miles southwest.
Craten—15 miles southwest.
Eudy—10 miles west.
Furr—8 miles west.
Haines—10 miles west.
Harvell—15 miles southwest.
Hatchcock—3 miles southwest.
Hearne—3 miles southwest.
Honeycutt—13 miles southwest.
Jennings Crowell—10 miles northeast.
Littleton—9 miles northeast.
Love—17 miles southwest.
Louder—3 miles west.
Parker—7 miles northwest; a very fine placer property which has produced largely.
Rock Hole—17 miles southwest.
Shankle—8 miles southeast.
Troutman—7 miles northeast.
Tucker—15 miles northwest.

Besides these there are a number of small placer deposits which are worked regularly in a small way. The Biles and Parker are fine placer properties and some work is now being done at the former. The Crowell was active part of last year. The outlook, as reported recently, for the Barringer is flattering, and it is expected that some of the other mines in that county will become active soon; notably, those near Albemarle

Automatic Feed-Pump and Receiver.

The accompanying engraving represents a new and improved form of Automatic Feed Apparatus which is being very successfully introduced by the Knowles' Steam Pump Works of New York and Boston, for draining coils, radiators, heaters, drying cylinders, steam jackets, etc., and feeding the water of condensation in its hottest condition direct to the steam boiler. It is perfectly reliable and automatic in its operation. It does away with the expense and annoyance of traps and tanks and returns the condensed steam to the boiler in a steady continuous flow as fast as it accumulates in the receiver above the pump. It is not affected by the variation of steam pressure and entirely prevents all snapping and "water hammer" in pipes so often caused by the use of traps having intermittent action. This Automatic Steam Pump and Receiver can be used for other purposes than a boiler-feed appliance; for regulating the brine circulation in refrigerating machinery, for the temporator apparatus in beer cooling, and for other circulating purposes.

The condensed steam entering the inlet nozzle at the top, gravitates to the bottom of the receiver. This water cannot accumulate in any quantity, as in rising it lifts the float and the steam pump takes it immediately away and forces it to the boiler. The pump is operated by the hollow float by means of the intermediate mechanism and balanced steam throttle. When the float rises with the water in the receiver, the pump is started and the speed is regulated according to the quantity of water flowing in—the more water the faster the pump moves. The pump slows down as the supply of water drops off, and when it ceases the pump stops entirely.

The hollow copper float cannot fill with water by "sweating" or actual leakage as it is drained from the bottom through the hollow arm and axis. The interior of the float is in communication with the outside atmosphere.

Some Advantages of the South.

BY M. B. HILLYARD.

(Continued from last week.)

VARIETY OF PRODUCTS.

An advantage of the South, worthy a very thorough survey—which I shall not attempt, is the numberless variety of her products. She has been reduced to the verge of beggary and temporary ruin by her wretched unpolicy in cultivating cotton so disproportionately. Suppose she could produce nothing else. The West is likely to suffer unspeakably before long, in those areas where she has only or can only raise wheat. In a considerable portion she cannot raise maize. In other areas the West cannot raise the cultivated grasses. But who shall enumerate what the South can produce? Let one think of the range from the climate of the Siberian crab-apple to the orange and the pineapple, for fruits, and that in much of the South fruits of some kind are to be had much of the year, (think of the strawberry and the peach for six months!) and vegetables all the year. And the vegetables one cannot think of undertaking to enumerate.

Cotton, ramie and jute, the South may be almost said to have a monopoly of; and silk culture can have no better climate in the known world, according to the best judgment of experts.

In cereals the South can show a long list—Indian corn or maize, wheat, rye, barley, the oat, buckwheat,* rice. Then there are ginger, indigo, the tea-plant, etc., etc. Her plants range from the sugar-cane of the tropics to the pine of rigorous climates. An

*Two crops per season. The best buckwheat I have ever seen was raised on the gulf coast between Mobile, Ala., and New Orleans, La.

interesting paper might be made upon the medicinal plants and herbs of the South. A very interesting book has been written on them; and in parts of the South it is a vocation of people to gather them in the wilds for the uses of pharmacy.

Consider all these resources in a mild climate, fertile soil abundantly watered by rainfall and never-failing streams, pierced by navigable rivers, with inexhaustible coal and iron.

WATERCOURSES.

Another advantage the South possesses is in the distribution of her navigable rivers, and their communication with ocean highways. One must take a map and view the remarkable location of the South. With the exception of Tennessee, Kentucky and Arkansas, from Maryland clear round to away west and south in Texas there is no Southern State but may be said to have an ocean front. Into the Atlantic Ocean and Gulf of Mexico empty streams which have

greatly immigration from New York; as, if immigrants settle South, New Orleans or some other port is their proper place of debarkation; if West, they are readily distributed there by Southern railroads running from the West to their point of debarkation.

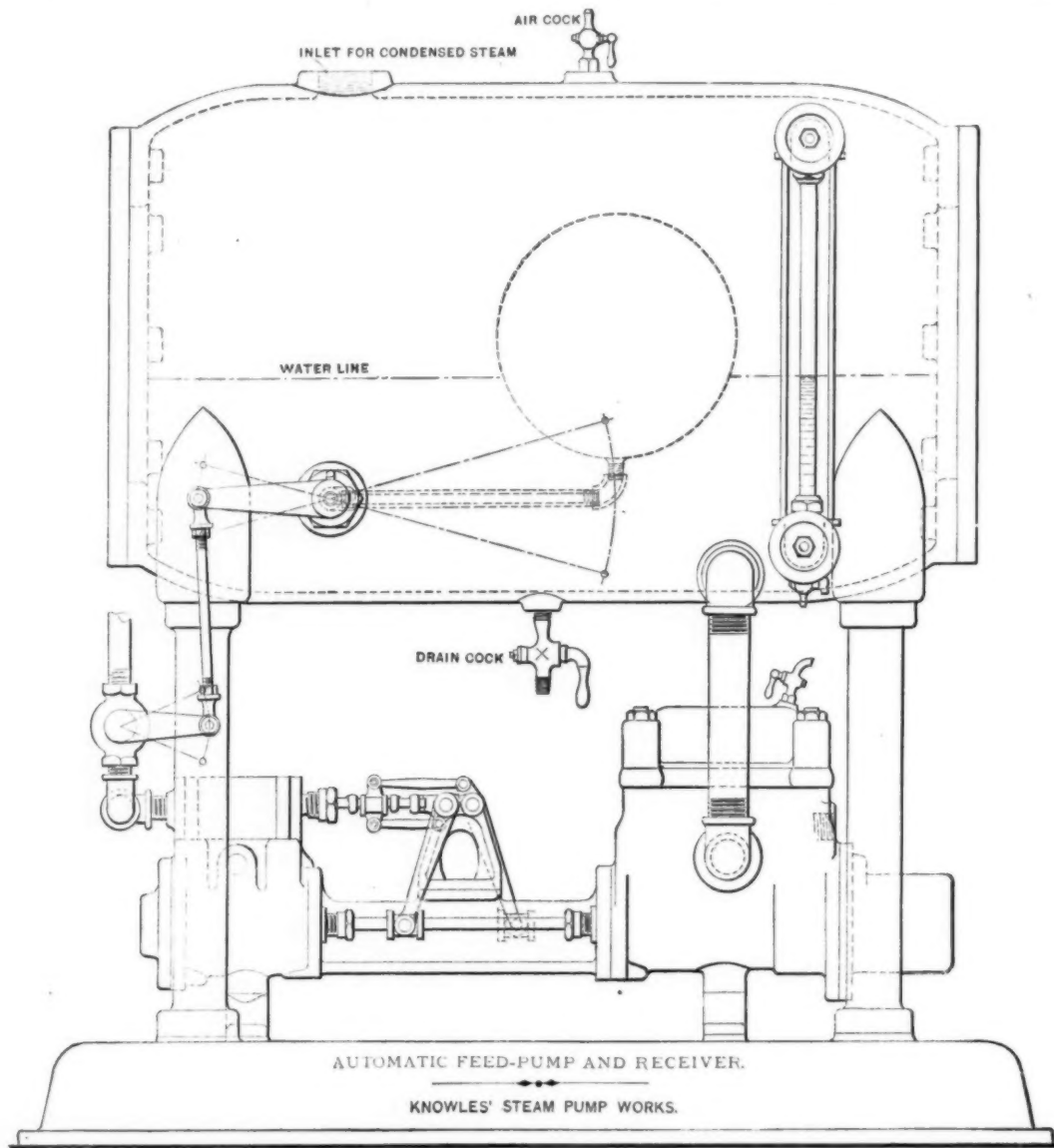
The import trade of the country, especially that of the West, is likely to be shared largely by the South.

But these rivers emptying into the ocean and the Gulf of Mexico penetrate far into the interior in the South. Almost every navigable river has its source in mountains, and is of unfailing flow. The Gulf of Mexico and the Atlantic Ocean furnish vast reservoirs for unfailing evaporation; and, by a stupendous harmony, the mountains compel the clouds to a deposition of their moisture, to flow down again in unceasing current to the source. Thus the Southern sun lifts the ocean, and the mountains take the welcome burthen; and this must ever be. However science may vacillate about the forests

then runs along much of the northern part of this State; then is deflected north, and courses clear through Tennessee and a part of Kentucky. The Cumberland, after watering much of Northern Tennessee and part of Kentucky, joins the Ohio.

The possibilities of this river system no one can predict. It is certain to play a great part in the future of these States. Their grain, flour, live stock, iron, coal, etc., will be immense interests in the future. Take the river system of Alabama and East Mississippi. See the future these rivers have before them!

The rivers of the South, in parts, penetrate, in many instances, very rich mineral tracts. In other parts of the South the same may be said of a number of their rivers. But, besides transportation for the future flour, cereals, live stock, hay, the products of the mine and manufactories of various kinds, the rivers and streams will play a most important part in furnishing cheap,



their sources far in the interior. On these streams, at greater or less distances from their mouths, are situated the leading Southern cities. Before the era of railroads, water dictated the location of cities; and water, of what one may term a navigable depth, can never be superseded by railroads. In the past, water has played a most important part as a factor in the development of Southern cities. Look at her leading cities—Baltimore, Richmond, Norfolk, Wilmington, Charleston, Savannah, Mobile, New Orleans, Galveston. But in the future water is to play a still greater role than ever in the past. One illustration—that of the deepening of the Mississippi river—shows what one great waterway may do. This came very near revolutionizing the grain transportation of this country. It saved (and will for all time save if the jetties act well) millions of dollars per annum to the Western farmers, by giving cheaper rates to Europe. It is probably destined to deflect

making more or less rainfall, the ocean must rise in vapor at the bidding of the sun; the clouds must obey the stern command of the haughty altitudes of the Appalachian chain.

I have said that Arkansas, Tennessee and Kentucky are the only Southern States that have not an ocean front; but, except for certain conditions and for purposes of transportation, they virtually have. The Mississippi river rolls past the whole eastern front of Arkansas, and rivers from away up in the interior of the State bear down her products. Past Western Tennessee the Mississippi flows the entire latitude of the State. Then Kentucky shares the benefit of the Mississippi river to Cairo, Ill. At Cairo the Ohio joins the Mississippi. From Cairo the Ohio is the western boundary of the State up to the State of Ohio. At Paducah, Ky., the Tennessee river comes in, after its rise in its sources in Western North Carolina and East Tennessee, and watering much of the latter. It sweeps well down into Alabama;

abundant, never-failing, never-freezing water powers for the future factories of the South.

The agriculturist and stock-raiser can appreciate the value of these rivers when he knows that they are supplied by hundreds of streams and thousands of rivulets forever dancing in sparkling joy through the meadows and over rocks, in dells, along from their unfailing sources in the mountains. The dairyman will cherish the spring-houses, and the stock-raiser and farmer will find perennial water for his flocks and herds; and a matter of no small consideration is it now, and hereafter will be a greater one, (in the great future of the South,) that cities and towns do and may have cheap and unfailing supplies of the clearest and purest water; and as many of these streams already contain abundance of fine fish, while many of them will be thickly populated hereafter by the wise providence of the Southern States, the people of the future South will find one of the best species of food for the support of man.

[TO BE CONTINUED.]

Law Department.

Edited by B. HOWARD HAMAN, Attorney at Law,
Baltimore, Md.

It is the province of this Department to reply to enquiries that may be made by our patrons respecting the legal aspects of any matter that may arise in their business. Any questions as to doubtful points of law will be answered without charge in this column. All questions submitted must be accompanied by the name and address of the sender, not however, for publication. Letters should be addressed, Editor Law Department, MANUFACTURERS' RECORD.

Editor Law Department,

Manufacturers' Record:

I have several questions which I would like to ask you which do not relate strictly to manufacturing interests, but I would be obliged for your reply to them. 1. Is there any redress to be had against commission merchants of your city who receive consignment of goods from out-of-town parties to sell on commission, and then after the goods are sold the shipper receives nothing but promises to pay? The commission merchant keeps on in business but does not deny that he owes the money. He, however, fails to pay anything. 2. Has it been decided by the courts of your State, or any other State to your knowledge, that laws against oleomargarine are unconstitutional? 3. Can you indict a man who gives you a check upon a bank where he has no funds? SHIPPER.
CHESTER, PA., March 20, 1886.

Reply—You can not do anything in the first matter which you ask about, except to sue the commission man. There is a law now pending before the legislature of Maryland which, if it passes, will afford an ample remedy to shippers in such cases as you suppose. This law compels the commission man either to pay up from the proceeds of a sale or make an assignment within 30 days. If he does neither he goes to jail. 2. Laws preventing the sale of oleomargarine entirely are unconstitutional. Laws which compel the oleomargarine people to sell their article for what it is are valid. 3. You can indict anybody, but you can't punish the man in the case you suppose unless he knows he has no funds in bank when he gives the check.

Editor Law Department,

Manufacturers' Record:

Does a material man's lien for machinery rank ahead of a mortgage which is given on the property before the machinery is put in, but after the building is begun? J. W. C.
PITTSBURGH, March 22, 1886.

Reply—No. In this respect the lien for machinery differs from liens for other classes of material, which rank ahead of any mortgage put upon the property after the building is begun.

Editor Law Department,

Manufacturers' Record:

I have a claim against a man who lived in one of the counties of your State and who has died leaving a farm in that county. He died in Baltimore, but left no personal property. Can I sue the heirs at once and take the land for my debt? L. H.
NEW YORK, March 24, 1886.

Reply—No. You must first take out letters of administration. If the family does not take out letters of administration, the largest creditor applying to the Orphans Court can get letters. He then must show that there is no personal property, and after this he can sell the land for his debt.

Editor Law Department,

Manufacturers' Record:

A gentleman has died in this city who held large blocks of stock in corporations doing business in Baltimore. Is it necessary to go through any formalities in Maryland in order to have the stock transferred to the persons who are entitled to it as representatives of the deceased party? G. H. N.
ATLANTA, GA., March 25, 1886.

Reply—Yes. You must advertise the transfer twice a week for four weeks in two daily newspapers published in this city.

LEGAL JOTTINGS.

It has recently been decided in Maryland that where a saloon keeper is indicted for selling liquor on Sunday he can not defend himself by proving that he was away and did not know anything about the sale, which was made by his clerk, who had received ex-

press orders not to sell any liquors on Sunday.

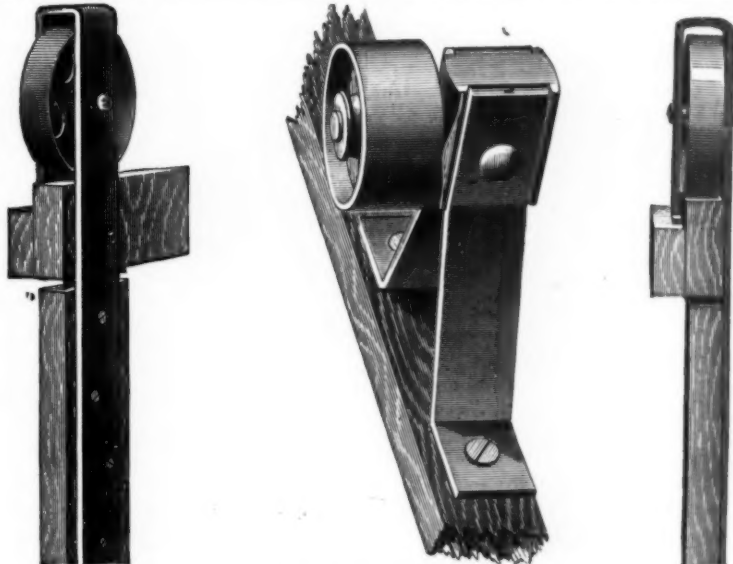
An attachment for fraud in Maryland requires an affidavit and a bond. No bond is necessary in a foreign attachment.

In a suit on a promissory note against the endorser of the note it is not necessary for the holder to prove the signature of the maker. This is implied in proving the signature of the endorser.

The Revolution of Industries.

The great difference between the industries of to-day and those of a century ago, says Prof. Arthur T. Hadley, in the course of an able paper in the Chicago Times, lies in the existence of large permanent investments. A great part of the business capital of the country is now embodied in railroads, machinery, buildings constructed for special purposes, or other forms of plant which would be of little value for any use except the one for which they were originally designed. Within sixty years the world has seen an investment of between \$30,000,000 and \$40,000,000 in steam power. All these things are of no value, except as a means of applying labor productively. On the other hand, labor can not be applied to advantage except by means of these instruments.

But the growth of permanent investment is not the only change which has taken place; Business investments are not merely large; they are also concentrated under the



THE CRONK HANGER.

management of a few men. The individual pieces of capital are no longer independent, any more than the individual laborers. Instead of a number of separate tools we have a complicated piece of machinery; instead of a number of separate workshops we have a large factory; instead of a number of local roads we have a large trunk-line of railway. The joint-stock company, or corporation with limited liabilities, was found to be the most effective means for securing this concentration of management of the capital of many individual owners. At the very outset it was felt to be dangerous; but it was also found to be a necessity. The States and countries whose laws favored the formation of corporations advanced industrially, while others fell behind. The result is that the system has been universally adopted. About a quarter of the wealth of the United States, or half its permanent investment, is now held by corporations. The effect has been to put the control of many of our industries into the hands of a few men, and to diminish or destroy the chance for the workman to become an independent employer of his own labor. It has fostered inequalities of power more than inequalities of wealth.

There was a time, not so very long ago, when the workman who had saved a few hundred dollars might buy a modest outfit and set up in business for himself. He could unite his own capital with his own labor, and be, in one sense, independent.

Every year this is becoming harder and harder. The skillful machinist can not lay up money enough to control the vast machinery necessary to make him independent. If he invests his savings in the stock of the company for which he works he may share in the profits of his own labor, but he does not share in its management. John Smith as a stockholder is an entirely distinct person from John Smith as a machinist; and the two can deal with each other only through the intervention of the manager, who represents the one and controls the other.

Farmers and Free Trade.

The Albany News and Advertiser adequately describes the stress of Southern farmers. It says the farmers became involved in debt after the war, and were thus dependent on merchants and warehousemen. "The reasons for this," says the News and Advertiser, "are manifest. Cotton was their only money crop. There was and there is no home market for other products. The all-cotton plan became a system, and cotton in a few years fell so in price as to be unremunerative."

This, assuredly, is a part of the problem which the Southern farmer has to face; and, with Statesman Morrison and other Western Statesmen tinkering at the tariff year after year, they have not much to hope for. It is true that protection has not as yet given the

for them in this business has been amply shown by results.

The farmers of the South are poor and cramped, but they are rich by comparison with the farming classes in England. Before we try any new experiments let us wait a little. Let us see what the outcome will be. We know very well that free trade will put an end to the growth of industries, and we know, moreover, that without the growth of industries the market of the farmer will be as barren as it has always been.—Atlanta Constitution.

Business in Roanoke.

THE remarkable industrial and commercial activity reported in our Birmingham correspondence prevails to a greater or less degree all over the South.

The following from the Roanoke (Va.) Leader shows the condition of things in that enterprising town:

While business in this city during the last eighteen months never became so depressed as it apparently did elsewhere, the improvement within the last two months has been most marked, and there is every evidence of its continuance and steady growth.

One of the first indications of improvement was the growing demand for residences and business stands, and while a number of these were tenantless about the first of January, there are now few unoccupied business stands in the city, and there is pressing demand for residences, nearly all of which are filled, and many new buildings just erected are occupied. Trade is quite brisk and money circulating freely; the deposits in the banks are larger than for some months past; there is an increased inquiry and demand for building lots, and many new buildings being begun and contracted for. With the exception of one wood-working factory that has been closed for a good while because of business embarrassments, every industry in the city is in full blast and working a full force. The machine works have increased their force to over 700 and are still adding to it; their pay roll has increased from \$16,000 in January to \$24,000 in February, and will exceed \$30,000 for March.

The most depressing influence that is felt in this section is the proposed Morrison tariff bill, which places iron ore and coal on the free list. These are the most important and leading industries of Southwest Virginia, and without which it would relapse in the dull and unenterprising condition of the period when these interest were dormant and undeveloped. We are much pleased to see that our people are awakening to the danger which threatens them in this proposed bill, and that protests against it are pouring in upon the committee, of which Mr. Morrison is chairman. While they will doubtless have little or no effect upon that distinguished "statesman," they cannot fail to exert a beneficial and saving influence upon the remainder of the committee and upon Congress. We should not relax our efforts in this direction, because the matter is most vital and one we cannot afford to neglect.

The Cronk Hanger.

The barn door hanger, manufactured by the Cronk Hanger Co., Elmira, N. Y., possesses some excellent features. It is made of wrought iron and never breaks. The straps on the back run half an inch below the bottom of the wheel, as shown in the cut, and prevent the door from jumping the track or from falling. The track is made ready to nail up, and anybody who can use a hammer can hang a door. The track is iron clad, thus reducing the friction to the minimum.

The Commercial Index, of this city, has entered upon its second volume with indications that its first year has been a prosperous one. The Commercial Index is a valuable addition to the counting room.

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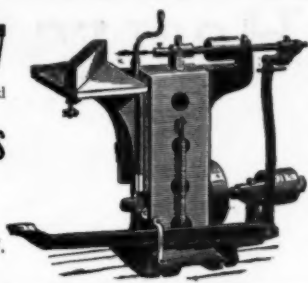
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PLANING, DOOR, SASH AND BLINDS, ETC., ETC.

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A searching scrutiny is invited of the statements herein submitted with care and the most impartial intention. Visits from responsible applicants, with view to buy on personal certification of the offering, will be liberally facilitated.

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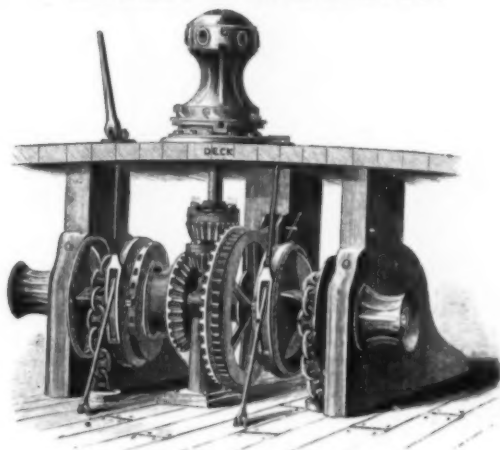
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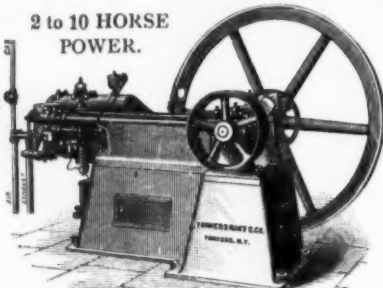


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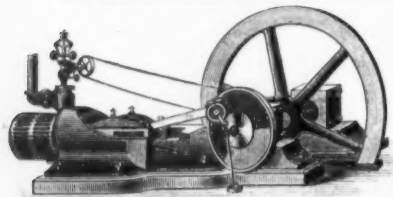
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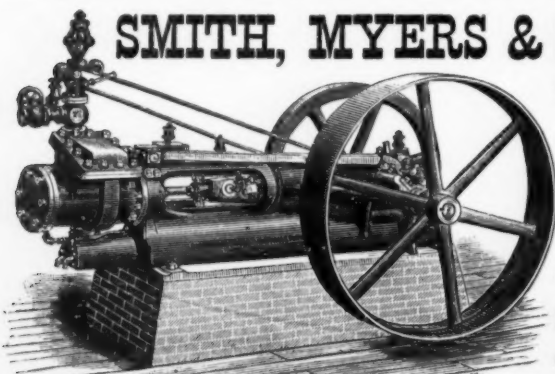
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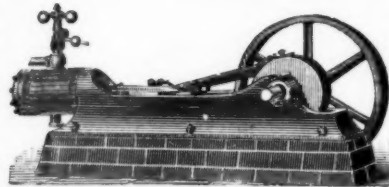
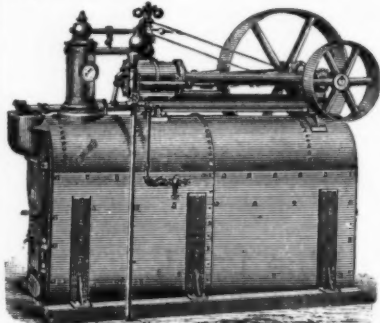
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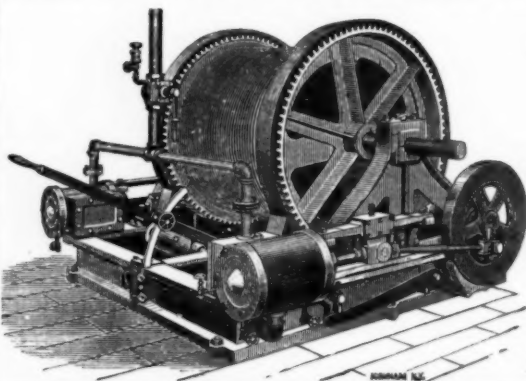


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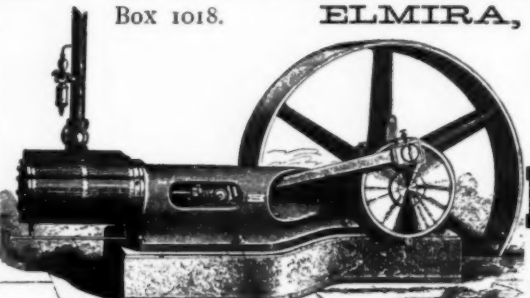
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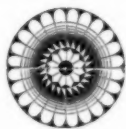
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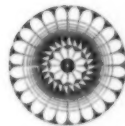
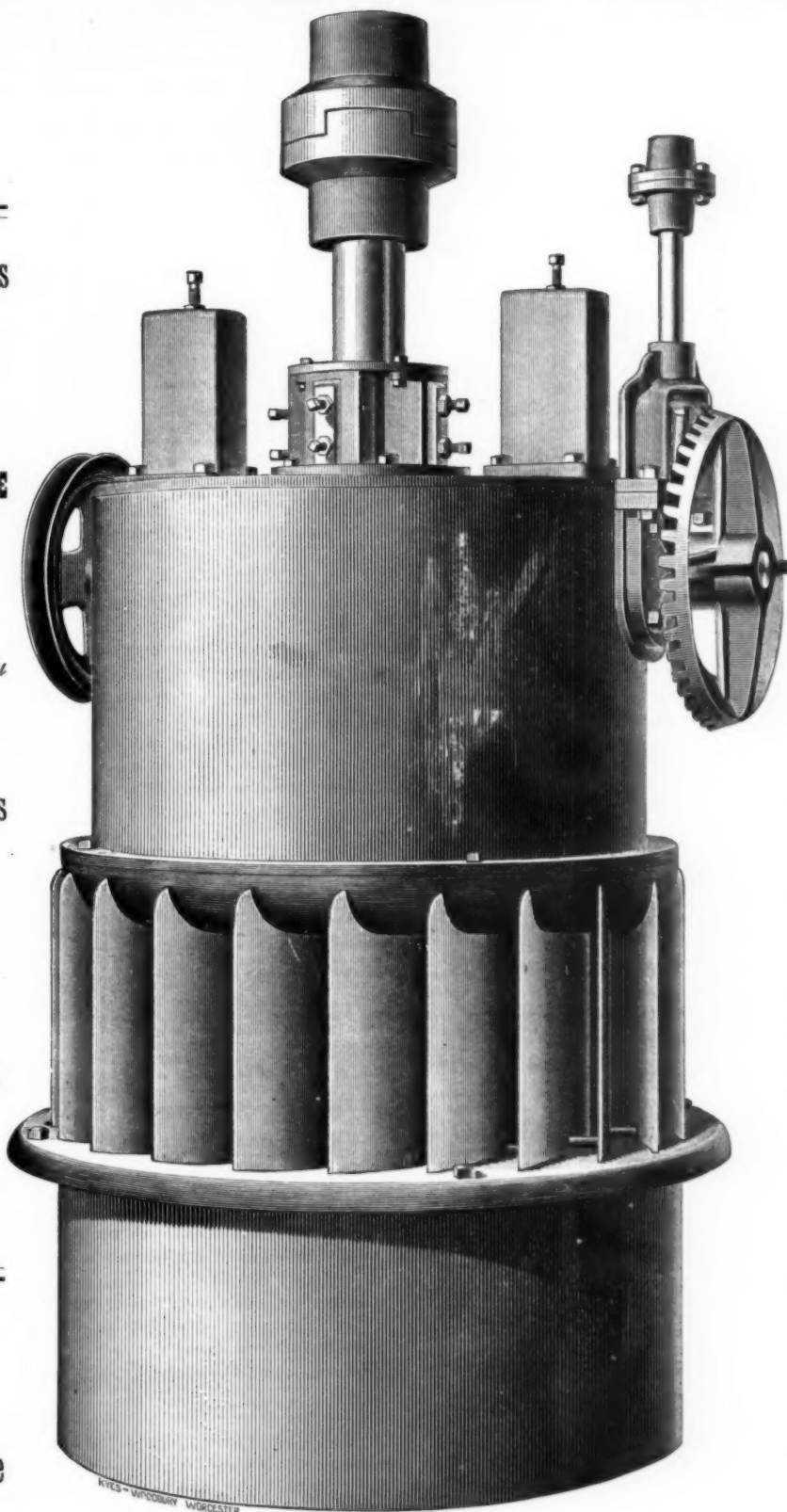
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Crocker Paper Company.....	39	25	300	1883	Syms & Dudley Paper Company.....	24	29	140	1881					
Farr Alpaca Company.....	48	19	300	1878	Springfield Blanket Company.....	36	18	155	1877					
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Cincinnati Iron Market Report

Specially reported by ROGERS, BROWN & Co., Pig
Iron Commission.
CINCINNATI, March 29, 1886.

The labor troubles have had a quieting effect upon the market. The disposition of most buyers is to wait and see what is the outcome of some of these controversies before committing themselves to contracts or to any orders beyond present requirements. There is a feeling, however, that the situation is essentially strong, and that the market cannot go off much in prices from these temporary causes. Stocks of pig iron west of the Alleghenies have reached the lowest point for years. But for some of these influences referred to a further advance in prices would be inevitable. It is also stated by pig iron makers that the increased cost entailed upon them by higher prices of ore, coke and labor render it impossible to

go back to last fall's prices without suffering heavy loss. In spite of the strikes, demand improved during the latter part of the week, and sales were more liberal. There is no material change in prices in any quarter, though pressure to sell certain speculative lots has given some appearance of weakness. We quote for cash on cars at Cincinnati.

Baltimore Charcoal Wheel Iron (all Baltimore ore).....	25	00@26	00
Virginia C. B. Charcoal Wheel Iron.....	25	00@26	00
Anthracite, No. 1.....	18	00@19	00
" " 2.....	16	00@17	00
" " 3.....	15	00@16	00
" " Mottled and White.....	13	00@14	00
Old Iron Rails.....	21	00@22	00
No. 1 Wrought Scrap.....	18	00@19	00
Old Car Wheels.....	16	00@16	50

The market continues steady and fairly satisfactory. Orders from the South particularly are increasing in frequency as well as volume. Orders for future delivery have been as large as usual, and, while buyers are willing to place large orders for future delivery, the factories are rather shy about receiving them, owing to the prospective strikes and consequent advance in material. There are no changes of any importance. The advances noted in previous issues are maintained.

Philadelphia Iron Market.

The strike in the bituminous coal regions has rather suddenly upset a good many calculations that had been made for the delivery of large lots of iron during the next thirty days. Several mills have already shut down, and several more are scraping their bins, to get coal enough to complete a few orders in hand. Everyone is uncertain as to the outcome of this strike. To-day's telegrams show the miners hopeful. The Broad Top, Pocohontas, Cumberland and Elk Garden regions will act in harmony, and if the strike is continued ten days longer, it will force some one to give way. No change has taken place in merchant iron or steel, or for that matter in crude iron, and large orders are not desired, and could not be secured even if sought for. The disposition in the iron trade here is to creep along slowly, and to wait until all labor troubles have been adjusted. No one knows what industry may be next affected. The iron trade had hoped to escape altogether, and has done so within itself, with two or three exceptions, such as the strike at Penn Coyd. The coal strike, however, is a blow in the rear for which the trade was not prepared. Very few orders in consequence are being sought. Crude iron is selling at \$16 to \$17 for forge and \$17 to \$20 for foundry, according to quality, with considerable Southern iron being offered at \$16 for forge. It is impossible to make any guesses as to the outcome, further than that iron will become scarce and naturally much firmer in price, if this coal trouble continues. The anthracite people have settled their difficulties, and business is booming:

Specially reported by ROGERS, BROWN & Co., Pig
Iron Commission.
CINCINNATI, March 29, 1886.

HOT-BLAST FOUNDRY.			
Ohio and Southern Strong Coke	No. 1..	\$18 00	@18 50
" " " "	" " "	" " "	" " "
" " " "	No. 2..	17 00	@17 50
" " " "	No. 3..	16 50	@17 00
Ohio Soft Stonecoal,	No. 1..	18 02	@18 50
" " " "	" " "	" " "	" " "
" " " "	No. 2..	17 02	@17 50
Mahoning and Shenango Valley Coke,	No. 1..	18 00	@18 50
" " " "	" " "	" " "	" " "
" " " "	No. 2..	17 02	@17 50

Hanging Rock,	No. 1.....	\$21 00@22 00
"	No. 2.....	20 00@21 00
Tennessee and Alabama,	No. 1.....	19 00@19 50
"	No. 2.....	18 00@18 50
FORGE.		
Strong Neutral Coke.....		\$16 00@16 50
Mottled " "		14 00@15 00
Cold Short.....		14 00@15 00

Southern Car-Wheel Iron.....	33	00@25	00
Hanging Rock C. B.....	38	00@30	00
" " W. B.....	22	00@24	00
Lake Superior Malleable.....	34	00@25	00

CINCINNATI, March 29, 1886.
The market is quiet; no change since our last report. Quote same as last:

Hanging Rock Charcoal, No. 1	\$19 50	@20 00
" " " " " 2	18 50	@19 00
Southern Charcoal " 1	18 50	@19 50
" " " " " 2	17 50	@18 50
Strong Neutral Coke, " 1	17 50	@18 00
" " " " " 2	17 00	@17 50
American Scotch, " 1	17 50	@18 00

Specially reported by W. B. BELKNAP & Co., Nails,
 Wire, Iron, Hardware, Carriage and Wagon
 Goods.

A week of mild weather has gone a long way toward encouraging farmers, and consequently expanded trade into fair volume. There has been an extremely active demand for all sorts of agricultural supplies and builders' goods.

The local shops seem well employed with work, and so far there has been no labor trouble worth mentioning in our city. The demand for increased pay by the painters and tanners was in most cases granted. There have been various threats of the St. Louis trouble extending this way, but so far nothing has developed.

Bar iron is quiet. Nobody is contracting for large amounts, that we know of, for there is none offering low enough to tempt speculation.

Steel.—Tool steel, while in good demand for contractors and mining purposes, is somewhat demoralized by the presence in the market of inferior grades, which are quoted as "best tool steel," although they have not yet stood the test of long and critical use.

Nails.—Are in good demand. There is no improvement in price, and not likely to be

Wire.—The effect of the Chicago conference seems to have been to stiffen the market a trifle.

General hardware is jobbing fairly. Some few of the advances, which seemed most likely to hold, have been disappointments. On the whole trade is in a healthy condition, and if manufacturers can afford to sell their goods cheap, we suppose the trade at large will have to bear it, grin or not, as we choose. We quote:

Bar Iron.....	10	1 80c	1 90
Cast Steel.....	10	10	12
Iron Sheet.....	10	10	12
Plow Steel Slabs.....	20	30	2 75
No. 27 Sheet.....	20	90	3 10
Galvanized sheet, best wire.....	50	50	55c
Galvanized Iowa bar.....	4	75	5 00
Burden Shoes.....	4	15	4 25
Juniata Shoes.....	3	75	3 85
Carriage Bolts.....	2	65	75c to 1 05
Steel nails.....	2	65	2 75
Iron Nails.....	2	50	2 60
Rope, Sisal.....	8	8	8 1/2
Rope, Manila.....	12 1/2	15	13
Screws, American Screw Co's list.....	75	75	80c
Axes.....	6	50	6 75
Cross cut saws, wide, per foot.....	26	6	38c to
Cross cut saws, narrow, per foot.....	21	21	23c to

With concessions to large or wholesale buyers.

LOUISVILLE, KY., March 29, 1886.

The market for pig iron is quiet. The demand is small, and offers light. It is likely that this condition of things may last for some time, as most furnaces who can do no more for some weeks than to fill the orders booked ; on the other hand, most consumers have purchased all the iron they will need for a corresponding length of time. There seems to be no disposition to lower prices, and one furnace that has a little iron to sell has advanced the price fifty cents, and claim they can market all they can make at the advance. We quote for cash as below :

Specially reported by LOWE & TUCKER, Brokers and Commission.

The situation of general business remains practically unchanged. Merchants, especially in the provision and hardware lines, are having their hands full in meeting the requirements of the farmers, who are now under full headway in their planting operations.

Shipments of pig iron to the farther Western points is somewhat curtailed by the strikes that are prevailing on the Western lines; some of our manufactures are also suffering from the same causes.

A fire broke out in one of the entries of the Rockwood Mines, but was quickly reduced to control, and is now confined to a space about 100 feet square, and from this ventilation is entirely cut off. It does not interfere at all with the workings of the balance of the mines, in which there are some fifteen different and separate openings which are not at all connected.

The pig iron market is quiet and prices unchanged. We quote:

No. 1 Foundry.....	\$15	@16	50
No. 2 Foundry.....	14	50	@15
American Scotch.....	14	50	@15
Gray Forge.....	13	00	@14
Car-Wheel Iron.....	23	00	@25
Ores, Red and Brown.....	1	50	@2
Furnace Coke.....	2	00	@2
Nails, car-load lots, 30 days.....	—	—	—
Bar Iron, per 100 lb.....	—	—	@1
Old Rails.....	—	—	@21
Old Wheels.....	—	—	@15
Wrought Scrap, No. 1.....	—	—	@70
No. 2.....	—	—	@50
Cotton Tie Clippings.....	—	—	@—
Cast Scrap.....	—	—	@—
Railroad Splices.....	—	—	@1
Railroad spikes.....	—	—	@2
Light Steel Rails.....	—	—	@25
Barb wire—Cambria link.....	—	—	@—
Barbed wire—four point galvanized.....	—	—	@—
Barb. wire.....	—	—	@—

Specially reported by ROGERS, BROWN & Co., Gay
Building, 204 N. 3rd street, St. Louis. W. H.
SHIELDS, Manager.

It is the general impression that the strike is about at an end, the strikers practically admitting that they are in the wrong. Although not a wheel is turning and business to a great extent suspended, prices remain firm. There is considerable trading in the territory tributary to this market, and the outlook is better than for some time past. We quote:

Missouri.....	\$17 00@18 00
Southern.....	18 00@19 50
Ohio.....	— —@— —

Missouri.....	—	—	—
Southern No. 1.....	18	50	18 75
Southern No. 2.....	17	50	17 75
Southern No. 2½.....	—	—	—
American Scotch.....	19	00	21 00

Missouri.....	16 50@16 75
Southern.....	15 75@16 50

Southern.....	20	00@25	00
Lake Superior.....	21	00@23	50

Old Wheels.....	15 00@16 25
Old Rails.....	20 00@21 00
Connellsville Coke, East St. Louis.....	— —@ 5 40

The following Patents were granted to citizens of the Southern States, bearing date March 23, 1896. Reported expressly for this paper by Louis Bagger & Co., Mechanical Experts and Solicitors of Patents, Washington, D. C.

Alberty, K. S., Rutherford College, N. C.	
Keying-clamp.....	338,458
Bond, N. O., Fairfax C. H., Va.	Cook-stove.....338,472
Broyles, J. C., Tupelo, Miss.	Breach-loading fire-arm.....338,247
Burnap, G. S., Marietta, Ga.	Cleaner for bolt- ing-reel cloths.....338,630
Carrico, O. W., San Antonio, Tex.	Apparatus for use in dry out-houses.....338,480
Curran, F. J., Stanford, Ky.	Flying-target.....338,633
Dansch, P. G., Baltimore, Md.	Thill-coup- ling.....338,493
Davies, Howell, Coal Creek, Tenn.	Mine- ventilator.....338,495
Farley, J. C., Hearne, Tex.	Cotton-chopper.....338,255
Fuller, Watson, Atlanta, Ga.	Station-indica- tor.....338,398
Harrison, W. M., Baltimore, Md.	Hand fire- extinguisher.....338,580
Hartsfeld, C. L., Newport, Ky.	Furnace for precious metals.....338,265
Haydn, Geo., Baltimore, Md.	Motor.....338,468
Henry, T. W., Sanford, Fla.	Key-Ring.....338,268
Ingalls, Wm., Mobile, Ala.	Log-turner.....338,660
Kay, W. V., Belton, Tex.	Manufacture of oil- cakes.....338,530
Linthicum, Louis B., Helena, Ark.	Attach- ment for bake-ovens.....338,279
Maguire, C. R., Baltimore, Md.	Spring-balance scale.....338,535
Mitchell, Robert, Atlanta, Ga.	Mosquito- canopy.....338,428
Monroe, D. M., Baltimore, Md.	Can-solder- ing machine.....338,672
Moore, E. J., Baltimore, Md.	Water-tube boiler.....338,429
Ohlsen, H. C., Covington, Ky.	Vehicle-coup- ing.....338,546
Oliver, W. Y., Franklin county, Ark.	Combination-plow.....338,289
Parker, C. J., Albion, Md.	Cooking-vessel.....338,547
Porter, J. F., Mount Washington, Ky.	Sash- fastener.....338,548
Ries, E. E., Baltimore, Md.	Conduit for electric and cable railways.....338,556
Rudd, J. N., Sparta, Tenn.	Fruit-gatherer.....338,303
Singletary, Don, Union City, Tenn.	Horse- detacher.....338,308
Smith, J. T., Baltimore, Md.	Machine for making thimbles for bolts.....338,567
Wells, Geo., Annapolis, Md.	Signal-lantern.....338,574
Whitlock, J. G., Richmond, Va.	Stove-door handles.....338,455
Whitlock, J. G., Richmond, Va.	Stove-door handles.....338,456
Whitlock, J. G., Richmond, Va.	Sad-iron.....338,457
Wiedling, Hermann, Baltimore, Md.	Railway- system.....338,681
Wilhelm, Albert, Pleasant Hill, Tex.	Plow.....338,320

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TRADE NOTES.

The Value of Iron Roofing.

Iron roofing is no longer a new thing as many suppose, but has been used in many places in Europe and the United States for more than fifty years, and would be almost universally used if it could have been afforded heretofore at as low a cost as now, and had as good materials and a perfect mode of construction been used. Experience and ingenuity have prevailed over ignorance and doubt, and a perfect iron roofing is now to be had. Where well introduced it is considered the most economical, durable and perfect protection from the elements in use. It saves insurance, lightning rods and repairs. Nine-tenths of the fires occur on the roofs. People are now guarding against fire more than ever before. Insurance is about one-third less in case of an iron roof.

The fact that there is not a case known of a building with iron roofing being injured by lightning, is sufficient evidence that it is a non-conductor of this dangerous element. The cost of iron roofing is less than shingle roofs protected by lightning rods.

The most important feature of iron roofing, and that which should commend itself to all, is its durability. Everybody knows that so long as iron does not rust it will last, and as long as it is kept painted it will not rust. There is never any wear on the under side to wear the paint off, and if the upper side is painted every four or five years we do not see anything to prevent its lasting a hundred years. The cost of painting is but fifteen cents per square, including paint and labor. The saving in insurance will pay the difference in a very few years, between this and the cheapest roof that can be made. It is suitable for all kinds of roof, and for temporary roofs it excels all others, for it can be taken off, or any part, and used again without loss.

N. A. Haldeman & Co., 1221 Main street, Wheeling, W. Va., and 1007 Spruce street, Philadelphia, manufacture roofing made of extra charcoal iron and sheet steel. No rivets, screws, tongues, eyelets, counter-sinking, break the surface in applying this roof, and tools are loaned to reliable parties, and printed instructions sent with all orders. For further information and prices write for their catalogue A. Estimates will be promptly furnished.

F. H. CLEMENT, manufacturer of high grade wood-working machinery, reports the following recent sales, which would indicate that business with him is good: Seth Thomas Clock Co., Thomaston, Ct., 3 machines; Sam'l York, Rio Janeiro, 2 machines; W. Williams & Co., Melbourne, Australia; Sloat & Greenleaf, Watertown, N. Y.; Osborn-Tuering Co., Starrucca, Pa.; Flint Furniture Co., Faribault, Minn.; Fenton & Drum, Holyoke, Mass., 3 machines; Standard Wood Turning Co., Jersey City; W. F. Creelman & Co., Boston, Mass.; Wm. Beckert, Alleghany, Pa.

We call attention to the card of The E. H. Cook Co., Limited, of Rochester, N. Y., which appears in this issue of the MANUFACTURERS' RECORD. This well-known company have a national reputation for good, honest and substantial work, which they always do in a scientific manner. They are contractors and engineers for steam and hot-water heating for hotels, public buildings, State institutions or private dwellings, and will furnish plans and specifications for such jobs in any part of the South upon application. The E. H. Cook Co., Limited, were awarded the heating contracts for fitting out the Chicago Board of Trade, \$50,000; Soldiers Home Buildings, Bath, N. Y., \$30,000; New Powers Hotel, Rochester, N. Y., \$33,000; The Stillman Hotel, of Cleveland, \$34,000, and

many other large buildings that reflect credit on their engineering.

MESSRS. GEORGE DRAPER & SONS, Hopedale, Mass., have recently purchased of Mr. Hardaker, the inventor, the patents and business of making and selling the Hardaker Temple for this country.

Important.

The improvements of the Grand Union Hotel are simply elegant, and the hotel is always kept in perfect order. It is so convenient to all the depots that guests arriving by the Grand Central Depot have their baggage transferred to and from the Grand Union Hotel in five minutes, free of charge. Guests arriving by steamer or railroad, South, North, East or West, are conveyed to the Grand Union Hotel by the elevated railroad for five to fifteen cents, thereby saving \$3 carriage hire. During the past year 110,000 people occupied the 613 rooms of the Grand Union Hotel at \$1 and upwards per day, including of course its elegant suites of rooms for families on the European plan. The dining-rooms, restaurant, cafe, lunch and wine-rooms were supplied with the best at moderate prices. Families lived better at the Grand Union Hotel, and for less money, than at any other first-class hotel in New York.

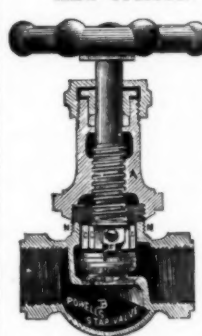
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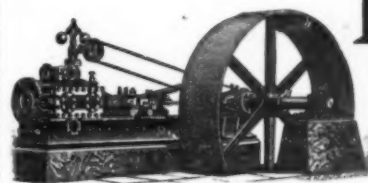
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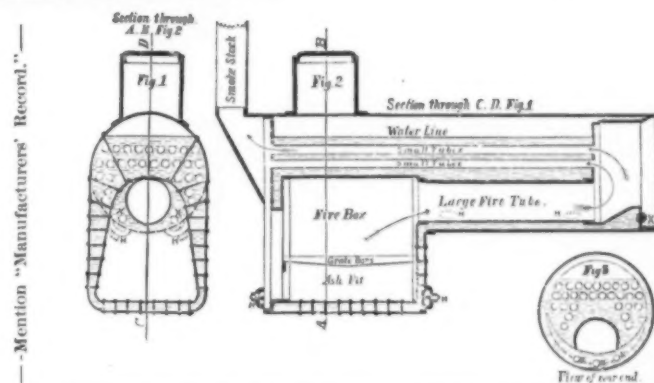
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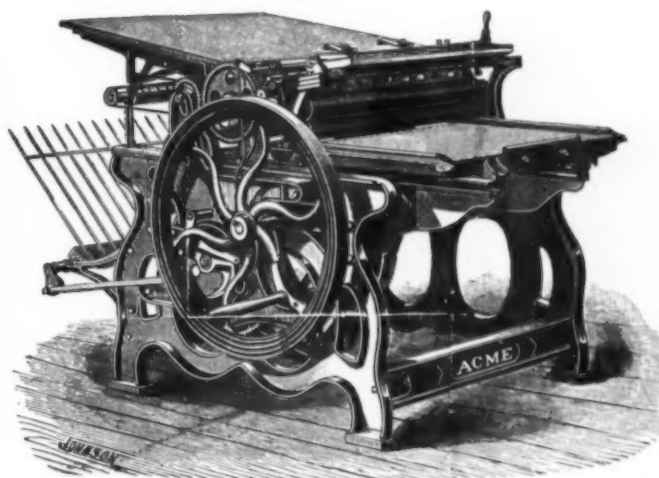


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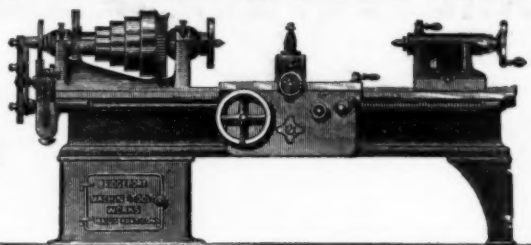
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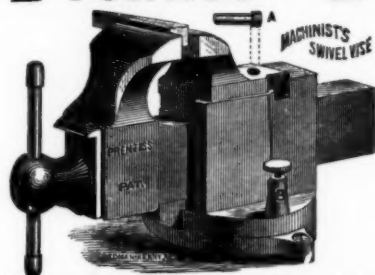
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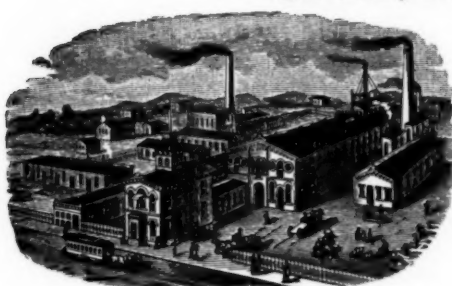
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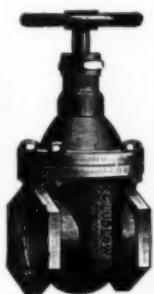
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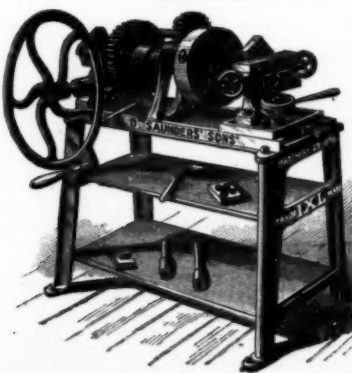
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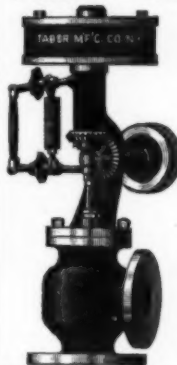
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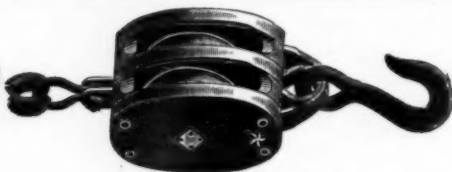
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Baltimore WHOLESALE Prices.

ANVILS.
Eagle and Vulcan..... 10 c. dis 20%
Wright's..... 10 c. dis 20%
Armstrong's Mouse Hole..... 10 c. dis 20%
Trenton..... 10 c. dis 20%
Wilkinson's..... 10 c. dis 20%

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Douglass Mfg. Co..... dis 60%
Ives..... dis 60%
Cook's Douglass Mfg. Co..... dis 60%
Griswold..... dis 60%
Patent Solid Head..... dis 25%
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Dowel and Hand Rail Bits..... dis 10%
Ives' Jennings' Bits..... dis 10%
Expansive Bits, Clark's small, 1/8; large, 26, dis 25%
Expansive Bits, Ives'..... dis 30%
Expansive Bits, Blagden's..... dis 30%
Hollow Augers, Ives'..... dis 25%
Hollow Augers, Douglass'..... dis 25%
Hol. Aug., Bonney's Adjust., 1/2 doz 1/8, dis 25%
Hol. Aug., Stearns' Adjust., 1/2 doz 1/8, dis 25%
Hol. Aug., Ives' Expansive, each 1/4, dis 30%
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Gimlet Bits..... dis 25%
Gimlet Bits, Diamond..... dis 25%
Double Cut Gimlet Bits, Shephardson's..... dis 40%
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Double Cut Gimlet Bits, Ives'..... dis 30%
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Patent Peg, Plain Top..... dis 40%
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AWLS, BRAD SETS, &c.
Awls, Sewing, Common..... 75c. to 1%
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" " steel..... 55% off
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Hand, Globe (Cone's Patent)..... dis 25%
Gong, Abbe's..... dis 20%
Gong, Yankee..... dis 20%
Gong, Barton's..... dis 20%
Leon Reading..... dis 25%
Pul, Brook's..... dis 25%
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Bloomfield..... dis 25%
Lever, R. & E. M. Co's..... dis 45%
Call..... dis 25%
Cow, Common Wrought..... dis 55%
Cow, Western, Sargent's List..... dis 55%
Cow, Kentucky, Sargent's List..... dis 55%
Cow, Moore's or Dodge's, Genuine Ky., new list:
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1 1/2 doz 1/2 doz 1/2 doz 1/2 doz 1/2 doz 1/2 doz
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Van Sand's Old Pattern, 1 1/2, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20, 21, 22, 23, 24, 25, 26, 27, 28, 29, 30, 31, 32, 33, 34, 35, 36, 37, 38, 39, 40, 41, 42, 43, 44, 45, 46, 47, 48, 49, 50, 51, 52, 53, 54, 55, 56, 57, 58, 59, 60, 61, 62, 63, 64, 65, 66, 67, 68, 69, 70, 71, 72, 73, 74, 75, 76, 77, 78, 79, 80, 81, 82, 83, 84, 85, 86, 87, 88, 89, 90, 91, 92, 93, 94, 95, 96, 97, 98, 99, 100, 101, 102, 103, 104, 105, 106, 107, 108, 109, 110, 111, 112, 113, 114, 115, 116, 117, 118, 119, 120, 121, 122, 123, 124, 125, 126, 127, 128, 129, 130, 131, 132, 133, 134, 135, 136, 137, 138, 139, 140, 141, 142, 143, 144, 145, 146, 147, 148, 149, 150, 151, 152, 153, 154, 155, 156, 157, 158, 159, 160, 161, 162, 163, 164, 165, 166, 167, 168, 169, 170, 171, 172, 173, 174, 175, 176, 177, 178, 179, 180, 181, 182, 183, 184, 185, 186, 187, 188, 189, 190, 191, 192, 193, 194, 195, 196, 197, 198, 199, 200, 201, 202, 203, 204, 205, 206, 207, 208, 209, 210, 211, 212, 213, 214, 215, 216, 217, 218, 219, 220, 221, 222, 223, 224, 225, 226, 227, 228, 229, 230, 231, 232, 233, 234, 235, 236, 237, 238, 239, 240, 241, 242, 243, 244, 245, 246, 247, 248, 249, 250, 251, 252, 253, 254, 255, 256, 257, 258, 259, 260, 261, 262, 263, 264, 265, 266, 267, 268, 269, 270, 271, 272, 273, 274, 275, 276, 277, 278, 279, 280, 281, 282, 283, 284, 285, 286, 287, 288, 289, 290, 291, 292, 293, 294, 295, 296, 297, 298, 299, 300, 301, 302, 303, 304, 305, 306, 307, 308, 309, 310, 311, 312, 313, 314, 315, 316, 317, 318, 319, 320, 321, 322, 323, 324, 325, 326, 327, 328, 329, 330, 331, 332, 333, 334, 335, 336, 337, 338, 339, 340, 341, 342, 343, 344, 345, 346, 347, 348, 349, 350, 351, 352, 353, 354, 355, 356, 357, 358, 359, 360, 361, 362, 363, 364, 365, 366, 367, 368, 369, 370, 371, 372, 373, 374, 375, 376, 377, 378, 379, 380, 381, 382, 383, 384, 385, 386, 387, 388, 389, 390, 391, 392, 393, 394, 395, 396, 397, 398, 399, 400, 401, 402, 403, 404, 405, 406, 407, 408, 409, 410, 411, 412, 413, 414, 415, 416, 417, 418, 419, 420, 421, 422, 423, 424, 425, 426, 427, 428, 429, 430, 431, 432, 433, 434, 435, 436, 437, 438, 439, 440, 441, 442, 443, 444, 445, 446, 447, 448, 449, 450, 451, 452, 453, 454, 455, 456, 457, 458, 459, 460, 461, 462, 463, 464, 465, 466, 467, 468, 469, 470, 471, 472, 473, 474, 475, 476, 477, 478, 479, 480, 481, 482, 483, 484, 485, 486, 487, 488, 489, 490, 491, 492, 493, 494, 495, 496, 497, 498, 499, 500, 501, 502, 503, 504, 505, 506, 507, 508, 509, 510, 511, 512, 513, 514, 515, 516, 517, 518, 519, 520, 521, 522, 523, 524, 525, 526, 527, 528, 529, 530, 531, 532, 533, 534, 535, 536, 537, 538, 539, 540, 541, 542, 543, 544, 545, 546, 547, 548, 549, 550, 551, 552, 553, 554, 555, 556, 557, 558, 559, 560, 561, 562, 563, 564, 565, 566, 567, 568, 569, 570, 571, 572, 573, 574, 575, 576, 577, 578, 579, 580, 581, 582, 583, 584, 585, 586, 587, 588, 589, 590, 591, 592, 593, 594, 595, 596, 597, 598, 599, 600, 601, 602, 603, 604, 605, 606, 607, 608, 609, 610, 611, 612, 613, 614, 615, 616, 617, 618, 619, 620, 621, 622, 623, 624, 625, 626, 627, 628, 629, 630, 631, 632, 633, 634, 635, 636, 637, 638, 639, 640, 641, 642, 643, 644, 645, 646, 647, 648, 649, 650, 651, 652, 653, 654, 655, 656, 657, 658, 659, 660, 661, 662, 663, 664, 665, 666, 667, 668, 669, 670, 671, 672, 673, 674, 675, 676, 677, 678, 679, 680, 681, 682, 683, 684, 685, 686, 687, 688, 689, 690, 691, 692, 693, 694, 695, 696, 697, 698, 699, 700, 701, 702, 703, 704, 705, 706, 707, 708, 709, 710, 711, 712, 713, 714, 715, 716, 717, 718, 719, 720, 721, 722, 723, 724, 725, 726, 727, 728, 729, 730, 731, 732, 733, 734, 735, 736, 737, 738, 739, 740, 741, 742, 743, 744, 745, 746, 747, 748, 749, 750, 751, 752, 753, 754, 755, 756, 757, 758, 759, 760, 761, 762, 763, 764, 765, 766, 767, 768, 769, 770, 771, 772, 773, 774, 775, 776, 777, 778, 779, 780, 781, 782, 783, 784, 785, 786, 787, 788, 789, 790, 791, 792, 793, 794, 795, 796, 797, 798, 799, 800, 801, 802, 803, 804, 805, 806, 807, 808, 809, 810, 811, 812, 813, 814, 815, 816, 817, 818, 819, 820, 821, 822, 823, 824, 825, 826, 827, 828, 829, 830, 831, 832, 833, 834, 835, 836, 837, 838, 839, 840, 841, 842, 843, 844, 845, 846, 847, 848, 849, 850, 851, 852, 853, 854, 855, 856, 857, 858, 859, 860, 861, 862, 863, 864, 865, 866, 867, 868, 869, 870, 871, 872, 873, 874, 875, 876, 877, 878, 879, 880, 881, 882, 883, 884, 885, 886, 887, 888, 889, 890, 891, 892, 893, 894, 895, 896, 897, 898, 899, 900, 901, 902, 903, 904, 905, 906, 907, 908, 909, 910, 911, 912, 913, 914, 915, 916, 917, 918, 919, 920, 921, 922, 923, 924, 925, 926, 927, 928, 929, 930, 931, 932, 933, 934, 935, 936, 937, 938, 939, 940, 941, 942, 943, 944, 945, 946, 947, 948, 949, 950, 951, 952, 953, 954, 955, 956, 957, 958, 959, 960, 961, 962, 963, 964, 965, 966, 967, 968, 969, 970, 971, 972, 973, 974, 975, 976, 977, 978, 979, 980, 981, 982, 983, 984, 985, 986, 987, 988, 989, 990, 991, 992, 993, 994, 995, 996, 997, 998, 999, 1000

BELLS.
Hand, Light Brass..... dis 75%
Hand, White Metal..... dis 60%
Hand, Silver Chime..... dis 20%
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Gong, Abbe's..... dis 20%
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Cow, Western, Sargent's List..... dis 55%
Cow, Kentucky, Sargent's List..... dis 55%
Cow, Moore's or Dodge's, Genuine Ky., new list:
Nos. 0, 1, 2, 3, 4, 5, 6 Hog dis. 70
1 1/2 doz 1/2 doz 1/2 doz 1/2 doz 1/2 doz 1/2 doz
Cow, Texas "Star"..... dis 40%
BELLOWS.
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BELLOWS.
Blacksmith's Common..... dis 50%
Molder's..... dis 50%
Hand Bellows..... dis 25%

BLIND FASTENERS.
Francis..... dis 20%
Macrell

Door Mineral... Same discounts as Door Locks.
Door Por. Jap'd...
Door Por. Plated...
Furniture Plain... 75c gross inch, dis 10
Furniture, Wood Screws... dis 20
Picture... dis 50
Hemacite, Picture... dis 35
Shutter, Porcelain... dis 50

Melting & Skim'g, Monroe's Pat. #1, dis 40
Melting, C & C... dis 40

LAWN MOWERS.
Acme Buckeye, Easy & Excelsior, new list, dis 40

Wire Fish... dis 25
Line Clothes, Galvanized, 100 feet... dis 30

LOCKS AND LATCHES.
Cabinet, Eagle... Changes made in list price
Cabinet, Gaylord... of some numbers Jan. 1,
Cabinet, Bridgeport... 1881, dis 25

Cabinet, P. & F. Corbin... dis 40
Trunk, new list, Jan 1, 1881... dis 15
Yale Lock Co., Flat Key... dis 40

Plate... dis 35
DOOR LOCKS, ETC.

Bradford...
Norwalk...
P. & F. Corbin... List prices as revised
Russell & Erwin... Dec. 18th, 45c
Mallory, Wheeler & Co... for cash.

Nimick & Brittan Mfg. Co...
Padlocks—Russell & Erwin...
Mallory, Wheeler & Co... dis 70
Norwich Lock Manf. Co... and 25 for cash.

Wm. Wilcox & Co...
Nimick & Brittan Mfg. Co...
Wm. Wilcox & Co's Plate Locks... dis 35
Yale Lock Manf. Co's "Standard"... dis 40

Comstock... dis 40
Conestoga... dis 80
Scandinavian, "Norwich"... dis 50
Nimick & Brittan's Burglar-Proof Locks... dis 50

MALLETS.
Penfield Block Co., Apple, Hickory and
Lignumvite... dis 10

Dixon's (P. S. & W.) Nos. 1 2 3 4...
Perry's, Nos. 1 2 3 4 5 6 7 8 9 10...
Each... dis 35
Woodruff's (P. S. & W.) Nos. 10 15 20...
Hales' Nos. 11 12 13... dis 35

Kieser's No. 55... dis 40
Kieser's No. 56... dis 40
Kieser's No. 57... dis 40
Kieser's No. 58... dis 40
Kieser's No. 59... dis 40
Kieser's No. 60... dis 40
Kieser's No. 61... dis 40
Kieser's No. 62... dis 40
Kieser's No. 63... dis 40
Kieser's No. 64... dis 40
Kieser's No. 65... dis 40
Kieser's No. 66... dis 40
Kieser's No. 67... dis 40
Kieser's No. 68... dis 40
Kieser's No. 69... dis 40
Kieser's No. 70... dis 40
Kieser's No. 71... dis 40
Kieser's No. 72... dis 40
Kieser's No. 73... dis 40
Kieser's No. 74... dis 40
Kieser's No. 75... dis 40
Kieser's No. 76... dis 40
Kieser's No. 77... dis 40
Kieser's No. 78... dis 40
Kieser's No. 79... dis 40
Kieser's No. 80... dis 40
Kieser's No. 81... dis 40
Kieser's No. 82... dis 40
Kieser's No. 83... dis 40
Kieser's No. 84... dis 40
Kieser's No. 85... dis 40
Kieser's No. 86... dis 40
Kieser's No. 87... dis 40
Kieser's No. 88... dis 40
Kieser's No. 89... dis 40
Kieser's No. 90... dis 40
Kieser's No. 91... dis 40
Kieser's No. 92... dis 40
Kieser's No. 93... dis 40
Kieser's No. 94... dis 40
Kieser's No. 95... dis 40
Kieser's No. 96... dis 40
Kieser's No. 97... dis 40
Kieser's No. 98... dis 40
Kieser's No. 99... dis 40
Kieser's No. 100... dis 40

MEASURING GAGES.
Stebbins Pattern... dis 70
Stebbins Genuine... dis 70
Stebbins Tinned Ends... dis 70
Chase's Hard Metal... dis 70
Self-Measuring, (Enterprise)... dis 70
Lincoln's Pattern... dis 70
Weed's... dis 70

Boys' Nos. 1 2 3 4...
Boss, Japanned Finish... dis 70
Boss, Bronze Finish... dis 70

SQUARE NUTS... 8 c off list.
Hexagon Nuts... 8 c off list.
Washers... 7 c off list.

Zinc and Tin... dis 60
Brass and Copper... dis 50
Malleable (Hammer's)... dis 50

PINKING IRONS.
Per dozen... 75 cts. net

FLAINTING MACHINES.
Astor Plaiting Machine... each \$15, dis 20
Crown Plaiting Machine... dis 25

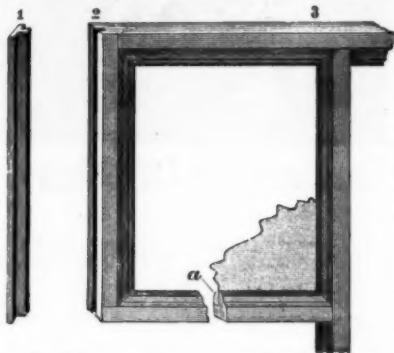
PLANES AND PLANE IRONS.
Bench, First Quality... dis 20
Bench, Second Quality... dis 25
Molding... dis 15
Bailey's (Stanley R. & L. Co.) New list, Jan. 1879... dis 20

The Stanley (S. R. & L. Co.) new list,
January 1879... dis 20
Bailey's... dis 20
Plane Irons, Butcher's... dis 20
Plane Irons, Auburn Tool Co... dis 20
Plane Irons, Ohio Tool Co... dis 20
Plane Irons, Sandusky Tool Co... dis 20

PLIERS AND NIPPERS.
Button's Patent... dis 35
Hall's Pat. Compound Lever Cutting Nippers,
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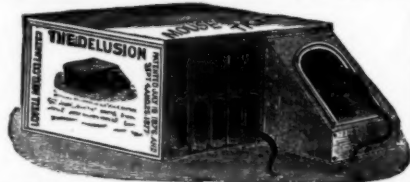
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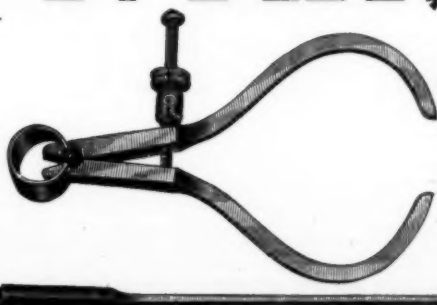
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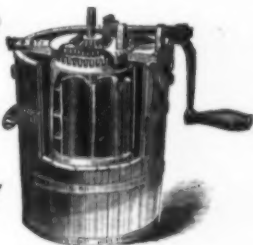
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That is a pretty strong letter, but it is only a sample of letters received by the manufacturers of this wheel. Among the recent shipment of wheels have been two—one a 34-inch and one of 60-inch—to a Georgia cotton mill. Two Hercules wheels are being put in at Natick Cotton Mill, and one at the Arctic Mill of B. B. & R. Knight near Providence. This will make eleven wheels furnished to this well-known firm, one of the most prominent in the manufacturing line in New England. Hercules wheels are sold in England, Ireland and Scotland, and on the Continent, a cable order having been received only a few days ago for one to go to France. The manufacturers say: "The Hercules gives the most power for its size and the highest average percentage from full to one-half gate of any wheel ever made." Their advice to all users of water wheels is to "get the best at first." If you are interested in water wheels, if you want a new wheel or a larger wheel, or a better wheel than you are using, write to the Holyoke Machine Co., Worcester, Mass., for catalogue No. 3.

Established 1867.

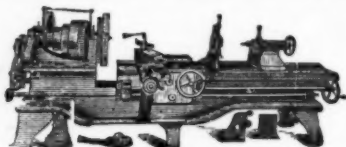
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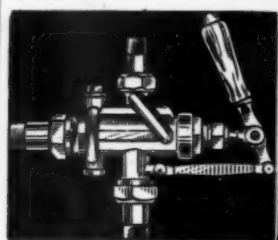
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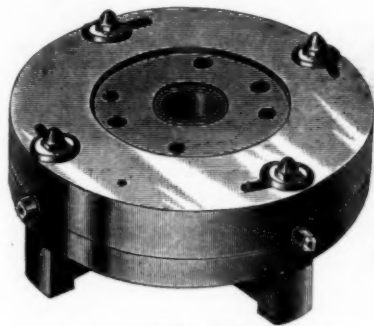
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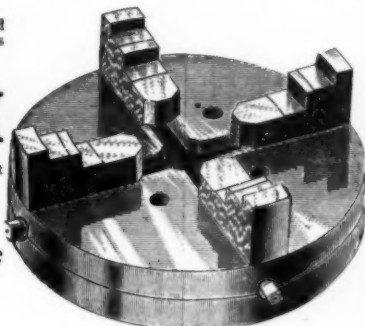
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The wear and tear of the Mill is much less than any other Quartz Mill doing the same amount of work, and the quality of the work done by it is greatly superior to work done in any other Quartz Mill now in use.

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The Mill is equally well adapted to crushing and pulverizing of all classes of ores, either for amalgamation or concentration, and will pulverize and amalgamate from one-half to one ton per hour, according to character of ore and fineness of screens.

With ordinary care there is no loss of mercury by flouring, and consequent loss of gold, as in most other Mills where mercury is used in the Mill.

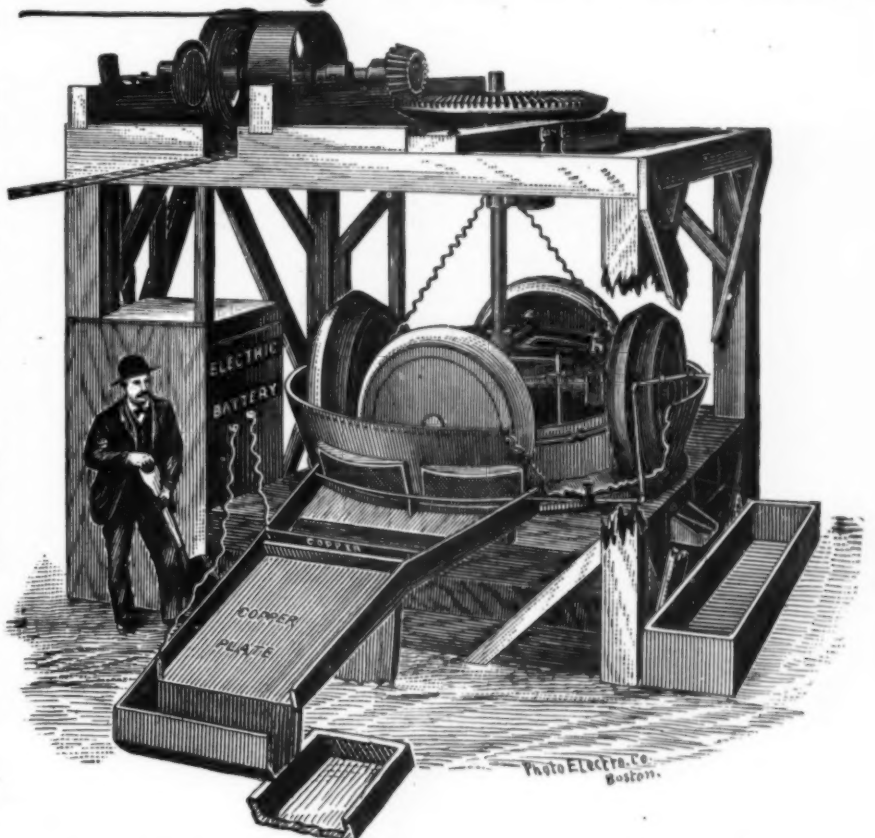
Amalgamation is carried on in the same operation with the crushing. The mercury is placed in the Mill in quantities varying from 10 to 40 pounds.

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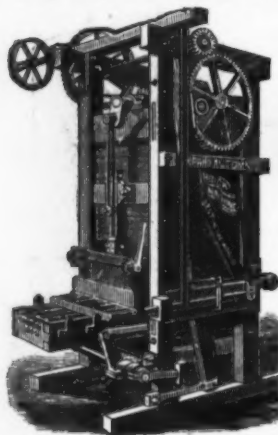
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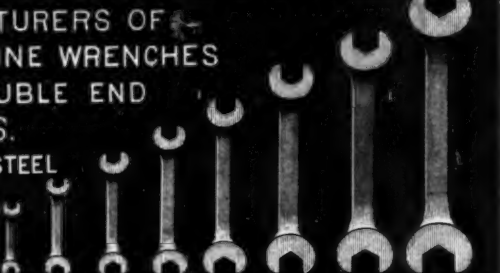


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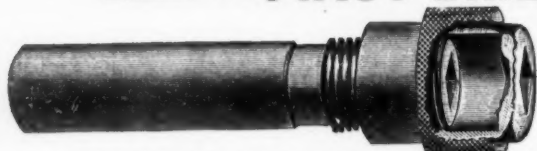
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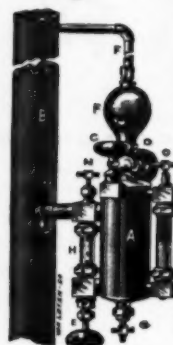
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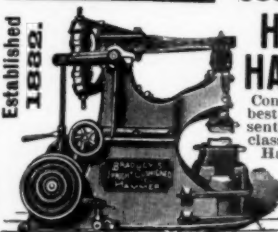
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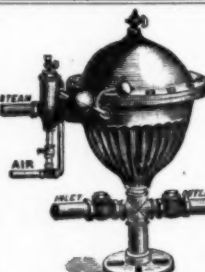
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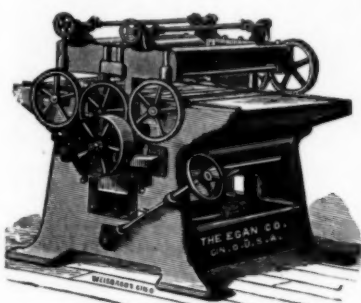
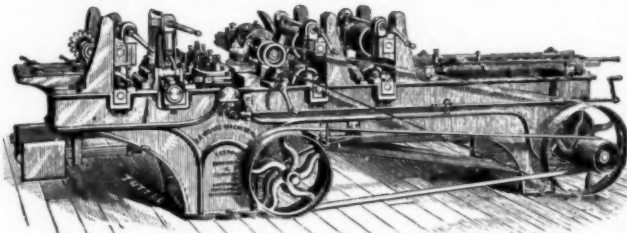
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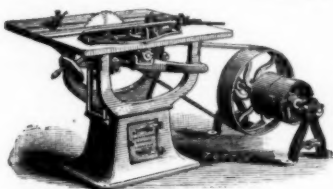
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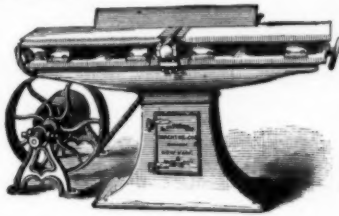
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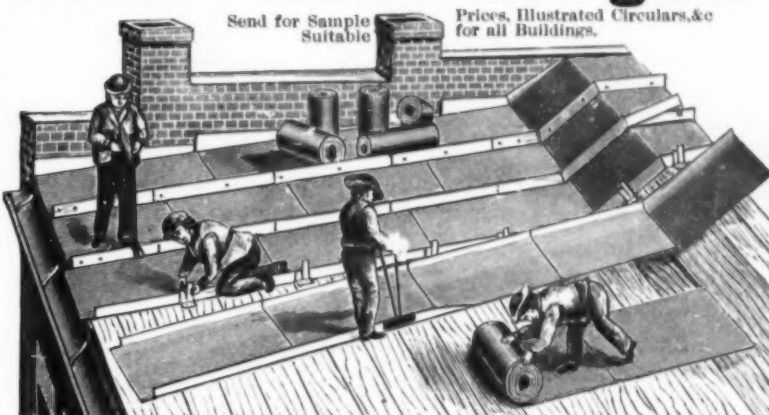
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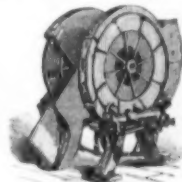
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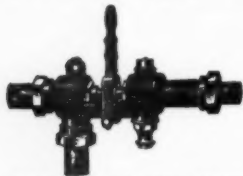
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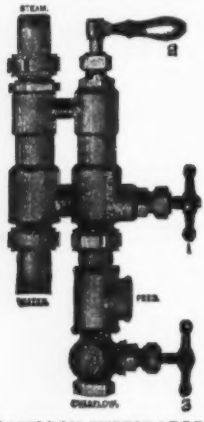
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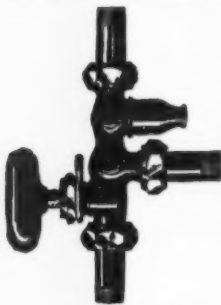
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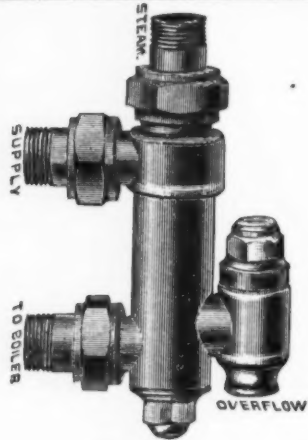


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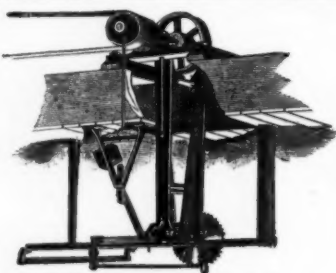
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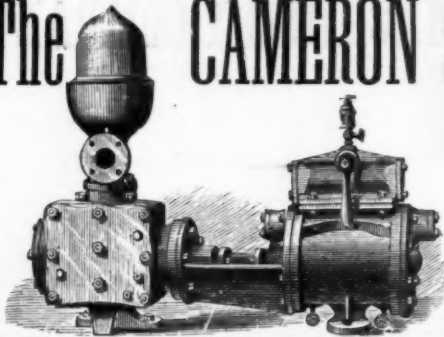
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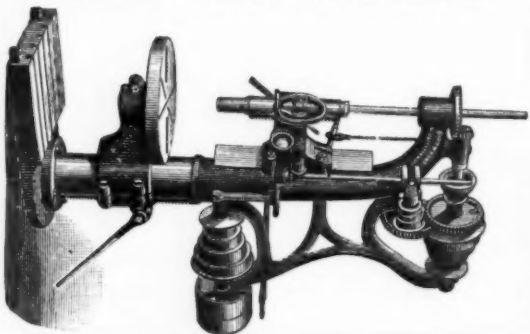
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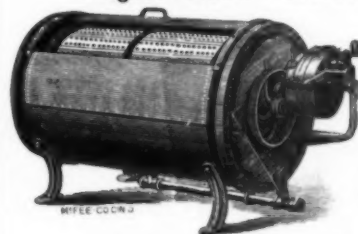
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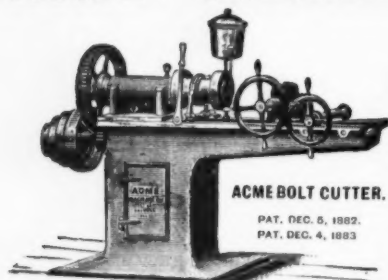
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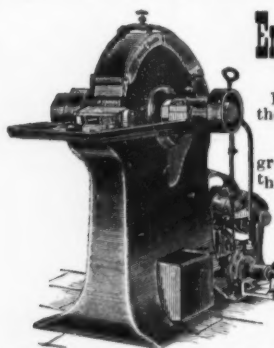
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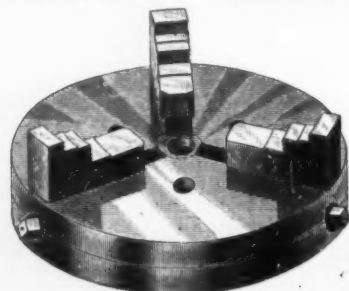
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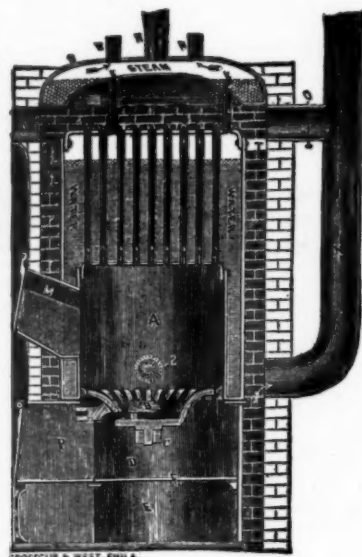
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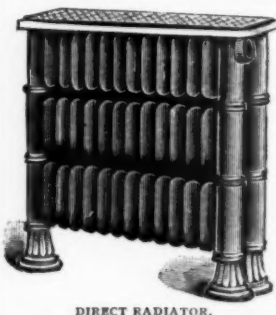
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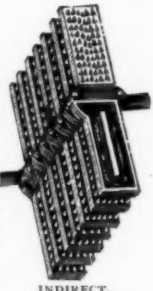
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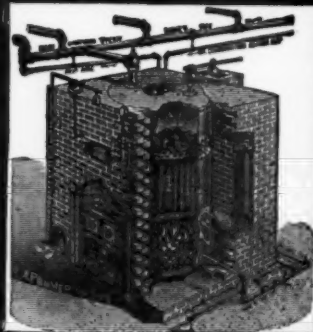


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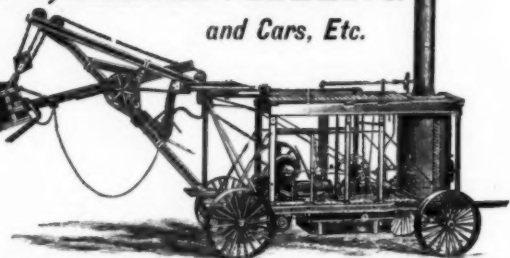
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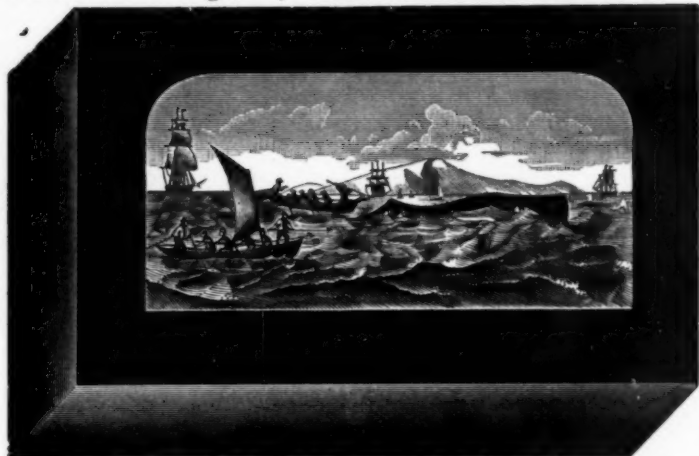
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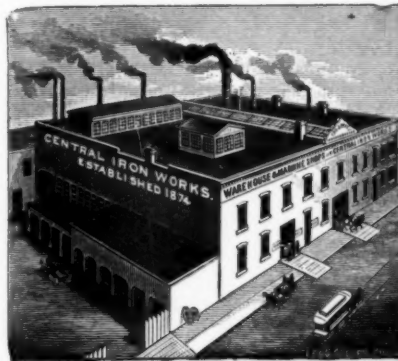
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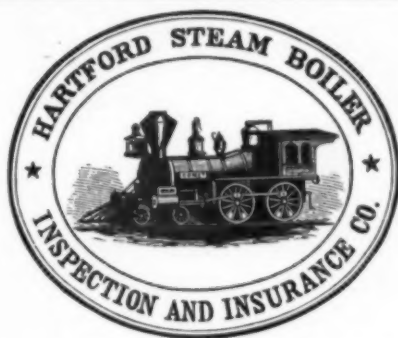
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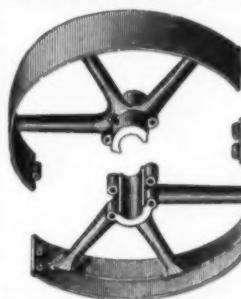
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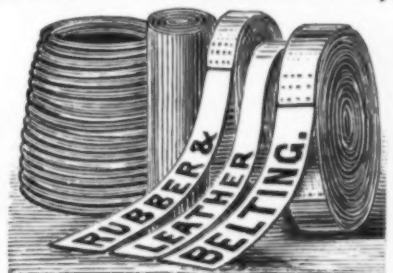
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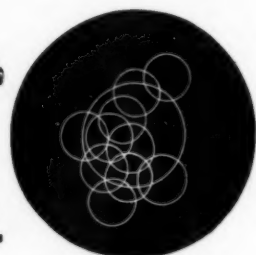
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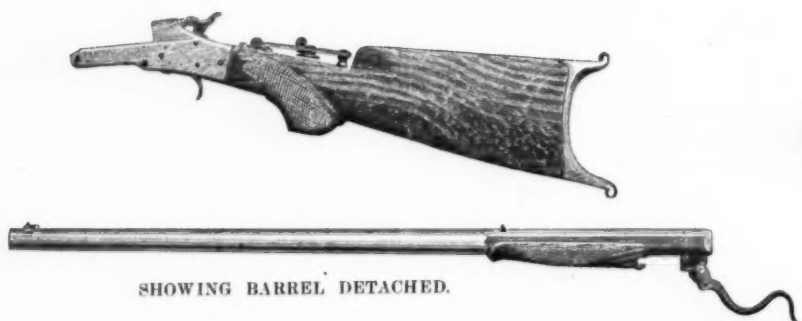


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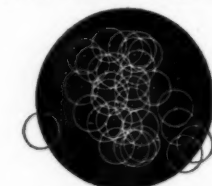
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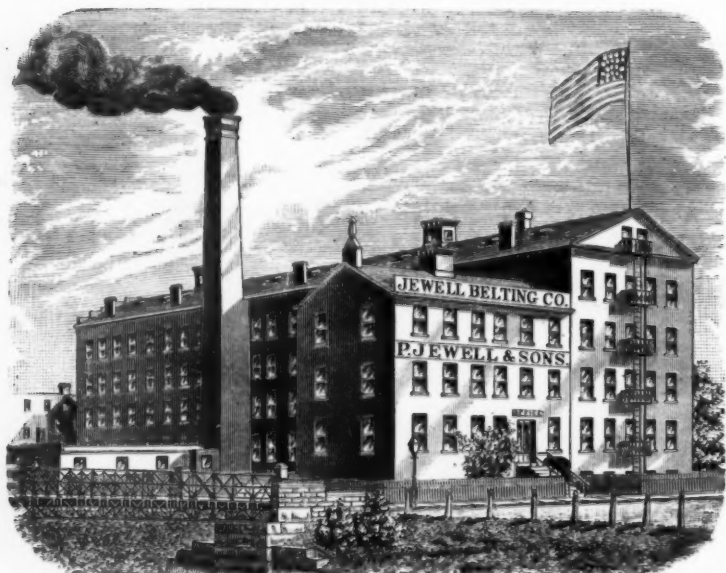
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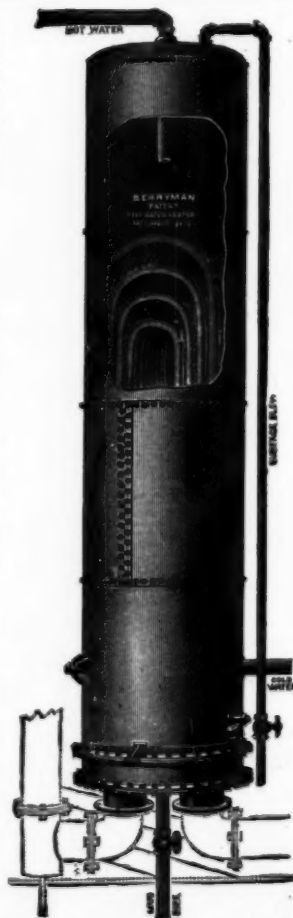
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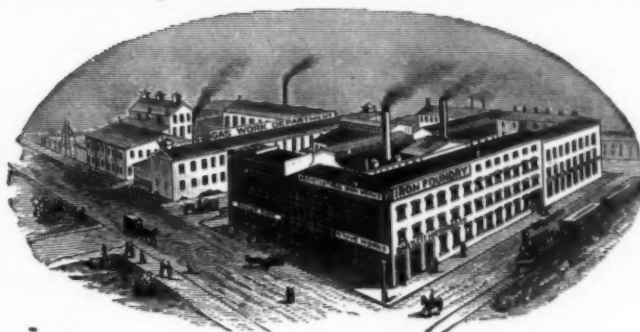
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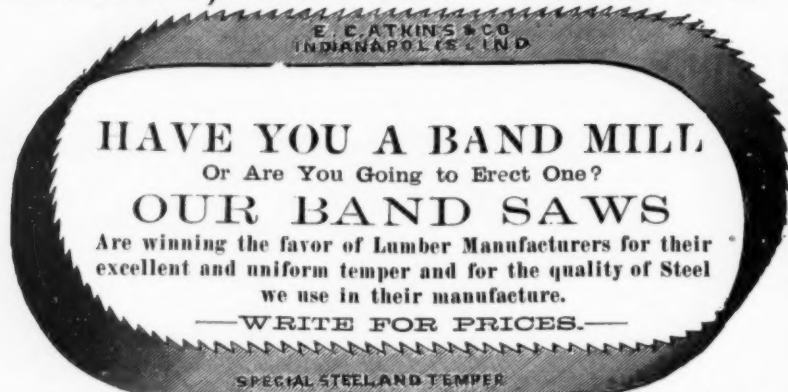
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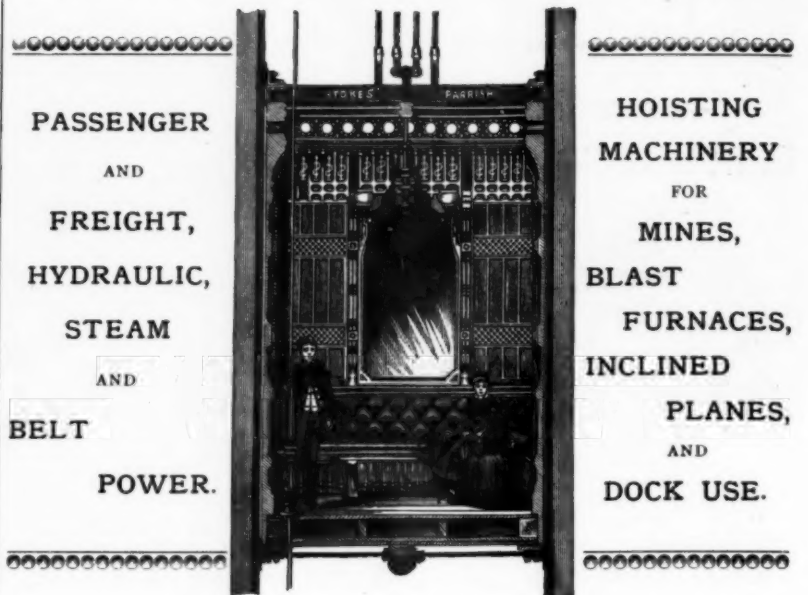
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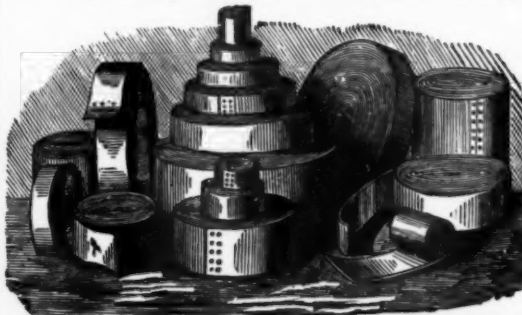
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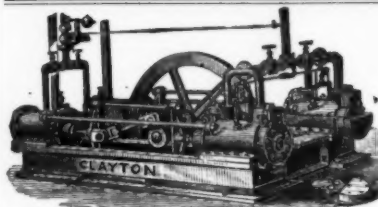
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